

Model CF Sentinel

(6" to 8" dia.)
FACTORY-BUILT
INSULATED CHIMNEY



INSTALLATION INSTRUCTIONS
&
MAINTENANCE GUIDE

**A MAJOR CAUSE OF
CHIMNEY RELATED FIRES IS
FAILURE TO MAINTAIN
REQUIRED CLEARANCES
(AIR SPACES) TO COMBUSTI-
BLE MATERIALS.**

**IT IS OF THE UTMOST
IMPORTANCE THAT THIS
CHIMNEY SYSTEM BE
INSTALLED ONLY IN
ACCORDANCE WITH THESE
INSTRUCTIONS.**

**PLEASE READ ALL INSTRUCTIONS
BEFORE BEGINNING YOUR
INSTALLATION.
FAILURE TO INSTALL THIS SYSTEM IN
ACCORDANCE WITH THESE
INSTRUCTIONS WILL VOID THE
CONDITIONS OF CERTIFICATION AND
THE MANUFACTURER'S WARRANTY.**

**Tested to Standard
CAN/ULC-S629
&
UL 103 Type HT**

***Installer: It is of the utmost importance that these instructions are
left with the homeowner.
Homeowner: Keep these instructions and maintenance guide in a safe
place for future reference.***

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CANADA
CORPORATION

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CERTIFICATION LABELS

	<p>LISTED / HOMOLOGUÉE FACTORY BUILT CHIMNEY / CHEMINÉE PRÉFABRIQUÉE (650°C) (650°C)</p> <p>LISTED MH6673 CANULC-S629, UL 103 TYPE HT</p>	
<p style="text-align: center;">MODEL CF</p> <p>SUITABLE FOR INTERIOR OR EXTERIOR INSTALLATION. MINIMUM CLEARANCE TO COMBUSTIBLES.</p> <p style="text-align: center;">50MM (2 IN.)</p> <p>FOR CONNECTION TO SOLID, LIQUID OR GAS FIRED APPLIANCES NORMALLY PRODUCING FLUE GASES OF 650°C OR LESS. MINIMUM INSTALLATION CLEARANCES TO COMBUSTIBLES, 50MM (2 IN.) OR AS ESTABLISHED BY FACTORY SUPPLIED SPACERS. MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS PACKAGED WITH SUPPORT. MAY ALSO BE USED WITH SPECIFIC FACTORY-BUILT FIREPLACES LISTED TO UL 127 OR CANULC-S610 WHEN SPECIFIED IN THE FIREPLACE MANUFACTURER'S INSTALLATION INSTRUCTIONS.</p> <p style="text-align: center;">WARNING !</p> <p>FAILURE TO FOLLOW THE INSTALLATION INSTRUCTIONS COULD CAUSE FIRE, CARBON MONOXIDE POISONING OR DEATH. IF YOU ARE UNSURE IF THE INSTALLATION REQUIREMENTS CALL THE PHONE NUMBER LISTED ON THE INSTRUCTIONS OR SIZING HANDBOOK.</p>	 <p>UP HAUT</p>	<p style="text-align: center;">MODÈLE</p> <p>CONVENABLE POUR UNE INSTALLATION INTERIEURE OU EXTERIEURE. DÉGAGEMENT MINIMUM DE TOUS COMBUSTIBLES.</p> <p style="text-align: center;">50MM (2 PO.)</p> <p>POUR EMBRANCHER AUX APPAREILS CHAUFFANT UN COMBUSTIBLE SOLIDE, LIQUIDE OU A GAZ PRODUISANT NORMALEMENT DES GAZ D'ÉCHAPPEMENT DE 650°C OU MOINS. DÉGAGEMENT MINIMUM D'INSTALLATION DE TOUS COMBUSTIBLES 50 MM (2 PO.) OU TEL QUE DÉTERMINE PAR LE FABRICANT DU COUPE-FEU DOIT ÊTRE INSTALLÉ SUIVANT LES INSTRUCTIONS D'INSTALLATION DU MANUFACTURIER EMPAQUETTES AVEC LE SUPPORT. PEUT ÉGALEMENT ÊTRE UTILISÉ SUR DES FOYERS FABRIQUÉS EN USINE CERTIFIÉS AUX NORMES UL 127 OU CANULC-S610 LORSQUE SPÉCIFIÉ DANS LES DIRECTIVES D'INSTALLATION DU FABRICANT DU FOYER.</p> <p style="text-align: center;">AVERTISSEMENT !</p> <p>NE PAS SUIVRE CES INSTRUCTIONS D'INSTALLATION PEUT CAUSER FEU EMPOISONNEMENT AU MONOXYDE DE CARBONE OU LA MORT. SI VOUS ÊTES INCERTAINS SUR LES PROCEDURES D'INSTALLATION, VEUILLEZ COMMUNIQUER AU NO DE TELEPHONE INSCRIT SUR CES INSTRUCTIONS.</p>
<p>Part Number : LABEL SAMPLE</p> <p>No. de pièce :</p>		 <p>1 23456 78901 2</p>
 <p>Grand Rapids, MI</p>		<p>8/6/19 12</p> <p>12345678901234567890123456789012 REV0 1890110135</p>

	<p>RESIDENTIAL TYPE AND BUILDING HEATING APPLIANCE CHIMNEY PART</p>	<p>PIECE COMPOSANTE POUR APPAREIL DE CHAUFFAGE DE TYPE RESIDENTIEL D'IMMEUBLE</p>
<p>LISTED MH6673 USA: UL 103 TYPE HT (6" - 17"); UL 106; III 2661 (18" - 24") Canada: CANULC-S629 (6" - 24"); UL106/UL-C83 (18" - 24") CANULC-S629 ONLY/ELEMENT Model/modèle: CF Section (6" - 17")</p>		
<p>SELKIRK CHIMNEY SYSTEM</p>		
<p>PART NUMBER: LABEL SAMPLE</p> <p>NO. DE PIECE:</p>		 <p>1 23456 78901 2</p>
<p>PRODUCT #:</p>		
 <p>GRAND RAPIDS, MI</p>		<p>12/19/18 12</p> <p>123456789012345678 12345678901234567890123 REV0 1890100135</p>

If you have a basic knowledge of carpentry and how to use hand tools, taking on the task of installing your new venting system will be easy. However, it is important that these installation instructions are followed. If you choose to have your product professionally installed, we recommend these products be installed by professionals who are certified in Canada by WETT (Wood Energy Technology Transfer) or l'APC (l'association des professionnels du chauffage) or NFI in the US.

TYPES OF APPLIANCES

CANADA APPLICATIONS

Your CF Sentinel chimney has been tested per CAN/ULC-S629 as an all fuel chimney. As such it is code approved for connection to solid, liquid or gas fueled residential type appliances and building heating appliances in which the maximum continuous flue gases temperatures do not exceed 650°C (1200°F). It has also been tested and approved to withstand temperatures of up to 2100°F for three thirty minutes intervals.

The installation should be in accordance with the Installation Code CAN/CSA-B365 (Solid-Fuel-Burning Appliances and Equipment) and / or the National Building Code of Canada and Provincial Building Code, etc. should be consulted.

May also be used with specific factory-built fireplaces listed to UL 127 and CAN/ULC-S610 when specified in the fireplace manufacturer's installation instructions.

U.S.A. APPLICATIONS

The CF Sentinel chimney has been tested per UL-103 as "Type HT". As such it is code approved for connection to solid, liquid or gas fueled residential type appliances and building heating appliances in which the maximum continuous flue gases temperatures do not exceed 1000°F. It has also been tested and approved to withstand temperatures of up to 2100°F for three ten minutes intervals.

The installation should be in accordance with NFPA 211 (Standard for Chimneys, Fireplaces, Vents and Solid Fuel fired Appliances), and / or local and regional codes such as the International Mechanical Code and Uniform Mechanical Code, etc.

PRE-INSTALLATION GUIDELINES

Your CF Sentinel chimney and connecting stove pipe diameter should be sized in accordance with the appliance manufacturer's recommendations.

Plan the installation of your appliance and chimney in such a way that both your chimney and your chimney connector (stovepipe) run is as short and straight as possible. By having too long and / or multiple bend installations you can reduce system draft which can affect the operation, and or performance of your appliance and or the chimney system. The chimney should be located within the building as to avoid cutting or altering load bearing members such as joists, rafters, studs, etc. If you have to cut or alter an existing load bearing member, special reframing methods are required which often include doubling of adjacent members. If such a case arises, contact your local Building Code Official regarding local regulations and proper installation methods.

Before commencing the installation ensure that you obtain any necessary building permits, and that your installation will conform with all federal and municipal building codes requirement.

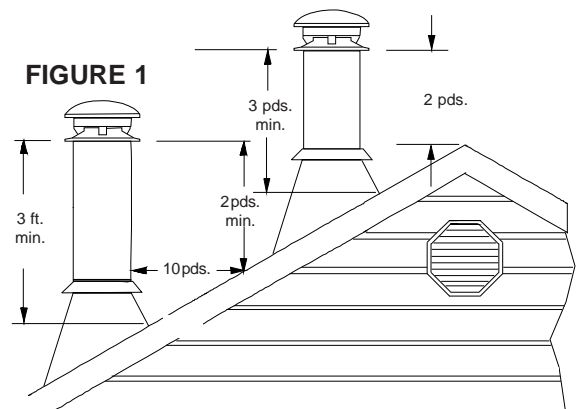
Sections of the CF Sentinel chimney which pass through accessible areas of the building such as through closets, storage areas, occupied spaces or any place where the surface of the chimney could be contacted by persons or combustible materials **must** be enclosed in a chase. The chase may be fabricated using standard building materials. Drywall mounted on 2" x 4" studs is typically used in this situation. Except for installation in single and two family dwelling, factory-built chimneys shall be enclosed with approved walls having a fire resistance rating equal or greater than that of the floor or roof assemblies through which they pass. The space between the outer wall of the chimney and the enclosure shall be at least 2 inches.

MAINTAIN A 2" MINIMUM AIR SPACE CLEARANCE BETWEEN INSULATED CHIMNEY SECTIONS AND COMBUSTIBLE MATERIALS.

WARNING: DO NOT PLACE ANY INSULATING MATERIALS OR RUN ANY ELECTRICAL WIRING WITHIN THE REQUIRED AIR CLEARANCE SPACE SURROUNDING THE CHIMNEY.

CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

Authorities require that the chimney extend not less than 3 feet (900 mm) above the highest point where it passes through the roof of a building and not less than 2 feet (600 mm) above any portion of the building within 10 feet (3 m). See figure 1 and Chart 2.



WEAR SAFETY GLOVES WHEN HANDLING SHEET METAL PARTS WITH SHARP EDGES

Be sure that ladders are in good condition and always rest on a level firm surface.

Be sure that electrically powered tools are properly grounded. The ideal location for your chimney is within the building envelope. In cold climates, the use of external chimneys may result in operational problems such as poor draft, excessive condensation of combustion products and rapid accumulation of creosote. Under these circumstances, the installation of the chimney within the building is strongly recommended.

If the chimney must be installed on an exterior wall it is recommended that the chimney be enclosed below the roof line to protect the chimney from cold outdoor temperatures, this may help reduce condensation, creosote formation and enhance draft. Provide an access door by the Tee Plug for chimney inspection and cleaning. The exterior enclosure may be insulated, maintaining the required minimum air space clearance of 2" (50mm) to any part of the chimney. Consult local building codes for cold climate applications.

Do not install the chimney directly at the outlet of the appliance. Interconnecting smoke pipe is required unless the appliance is specifically approved for that type of installation.

Use only with an appliance listed by a recognized testing authority such as Underwriters Laboratories Inc., Underwriters Laboratories of Canada, Intertek Testing Services, Warnock Hersey or ICBO.

The flue diameter of gas or oil fired appliances should comply with the appropriate Installation Codes such as CAN/CSA-B139 or CAN/CSA-B149 when installed in Canada, and the Installation Codes NFPA 54, ANSI Z223.1 and NFPA 31 in the United States.

YOUR CHIMNEY HAS BEEN TESTED, AND LISTED USING ALL OF THE SUPPORTS, SHIELDS, ETC., DESCRIBED HEREIN. DELETION OR MODIFICATION OF ANY OF THE REQUIRED PARTS OR MATERIALS MAY SERIOUSLY IMPAIR THE SAFETY OF YOUR INSTALLATION, AND VOID THE CERTIFICATION AND OR WARRANTY OF THIS CHIMNEY.

Situate the chimney in the structure so that it can be installed without cutting joists, sills, plates or load bearing partitions or members.

Connect only one appliance to a chimney.

There should be no draft regulators on solid fuel equipment and smoke pipe connector.

A minimum smoke pipe connector length of 3 feet (1 m) between appliance and chimney is recommended.

TOOLS

Your CF Sentinel chimney system is designed for installation using standard building materials and procedures. The following tools may be required:

- safety gloves
- safety goggles
- hammer and nails
- tin snips
- tape measure
- screwdriver and pliers
- plumb line and level
- square
- keyhole saw or power jig saw
- caulking gun

Other tools or equipment may be required, depending on your chimney location and the structure in which it is to be installed.

CF SENTINEL JOINT SECURITY:

High internal gas temperatures in a chimney force the internal pipe to expand or lengthen. This, in turn, may cause the joints to separate if they are not securely locked. The use of a chimney cleaning brush may also cause the joints to separate if not securely locked.

INSULATION COMPRESSION OF THE CF SENTINEL

Before assembling chimney lengths to one another, the insulation on the female end (held in place with a plastic retainer) should be below the outer bead so that it can compress during assembly. The upper side (male end), should be full of insulation (held in place with a white paper retainer and a web coupler) to the top of the length. Once you have assembled the lengths together, a locking band must be installed. With the insulation being compressed, this will provide insulation to insulation contact (see Figure 2).

NOTE: When the insulation retainers melt or volatilize during high temperature operation, the compressed insulation will fill in.

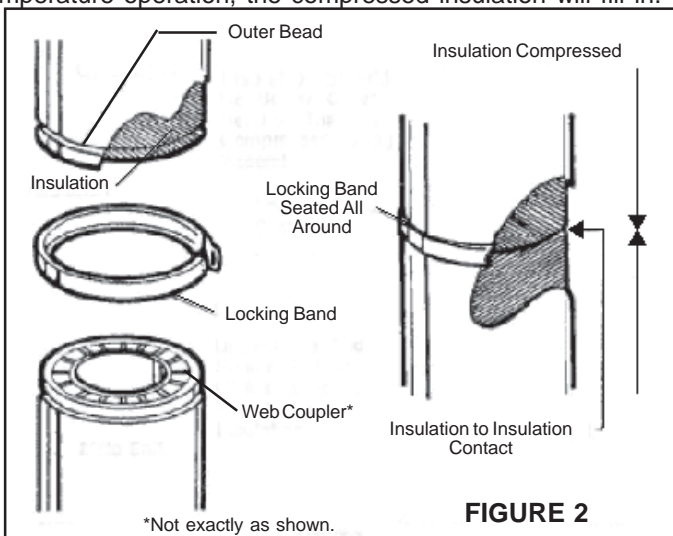
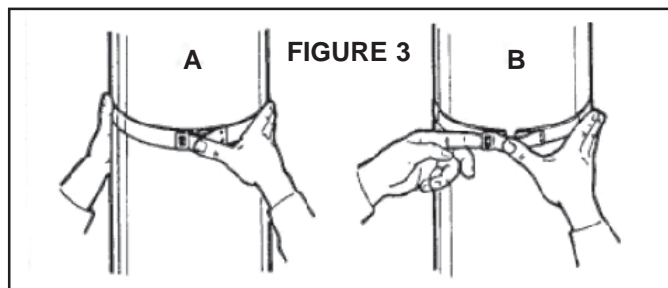


FIGURE 2

INSTALLING THE LOCKING BAND:

NOTE: The chimney pipe and fittings must be assembled only with the locking bands as furnished.

1. The clasp lockbands are simply seated in the beads of the joints and clipped together (see Figure 2 & 3A).



2. To remove the lockband, the clasp is pushed in and then unhooked (see Figure 3B). Lift the clasp with a screwdriver if necessary.

3. When a chimney section is suspended e.g. below a Cathedral Ceiling Support, the band(s) and the joints must be fastened using two (2) #6 x 1/2" stainless steel sheet metal screws (see Figure 4).

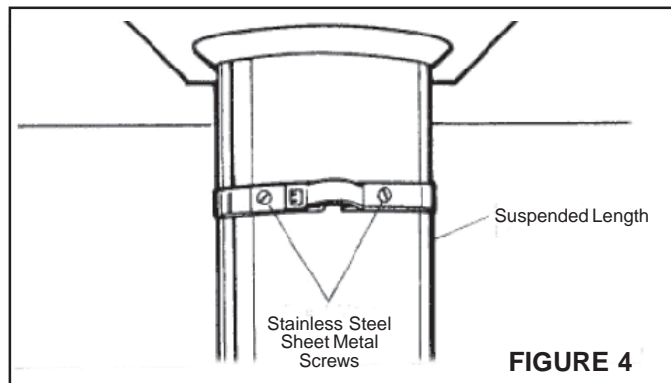


FIGURE 4

FRAMING DETAILS:

Plan your installation carefully. If possible, position the stove so that the flue outlet is centered between joists or rafters. Drop a plumb line to the center of the flue outlet and mark this center point on the ceiling. Lay out and frame in all openings ensuring the specified 2" clearance to combustibles is maintained. Refer to Table 1 or applicable Tables for framing dimensions and mark the appropriate cutting lines around the center point.

TABLE 1 Framing Dimensions			
Chimney Flue Diameter	*Ceiling Support	Wall (Support) Thimble	All Other Framing
6"	14 ¹ / ₄ " x 14 ¹ / ₄ " 362mm x 362mm	14 ¹ / ₂ " x 14 ¹ / ₂ " 369mm x 369mm	14 ¹ / ₂ " x 14 ¹ / ₂ " 369mm x 369mm
7"	14 ¹ / ₄ " x 14 ¹ / ₄ " 362mm x 362mm	15 ³ / ₄ " x 15 ³ / ₄ " 400mm x 400mm	15 ³ / ₄ " x 15 ³ / ₄ " 400mm x 400mm
8"	14 ¹ / ₄ " x 14 ¹ / ₄ " 362mm x 362mm	17" x 17" 432mm x 432mm	17" x 17" 432mm x 432mm

*Note: The clearance to combustibles obtained with a correctly installed **Ceiling Support Assembly** in the framed opening specified above has been tested. **The 2 inch clearance does not apply at this location.**

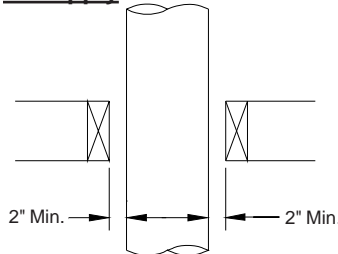


FIGURE 5
Typical Joist Framing

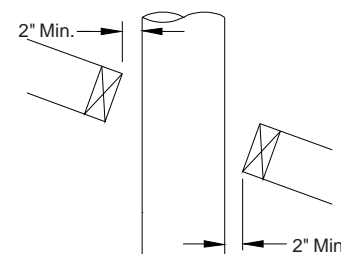


FIGURE 6
Typical Roof Joist Framing

All openings should be square (all four sides), plumb and in perfect alignment with each other (see figure 5). For sloping roofs and/or ceilings, ensure that the framing dimension is measured in the horizontal plane (see figure 6).

INSTALLATION PROCEDURES:

CEILING SUPPORT (CBSP)

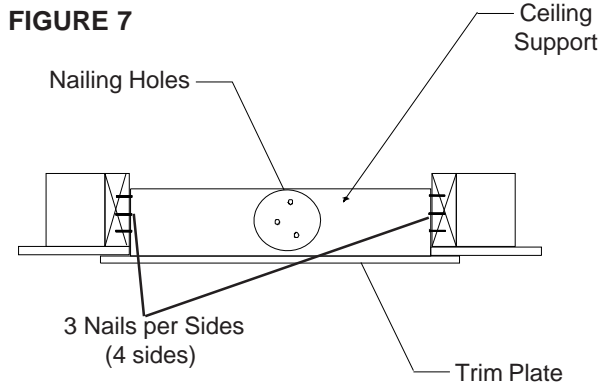
To complete a proper Ceiling Support installation, the following parts will or may be required:

- Ceiling Support: - Required when supporting chimney with a flat ceiling.
- Attic Insulation Shield: - Required where a chimney passes into an unoccupied attic space.
- Firestop Joist Shield: - Required where a chimney passes from a lower living space into an upper living space or occupied attic space
- Roof Flashing Assembly: - Required where the chimney penetrates a roof.
- Suitable lengths of Chimney: - The chimney diameter should be sized to suit the appliance.
- 15° or 30° Chimney Elbow: - and suitable supports; resupport assembly or roof support if required.
- Round Top: - To exclude rain and/or debris into the chimney.

The CF Sentinel Ceiling Support will support up to 40 feet (12.2m) of chimney sections, all of which must be installed above the support. Figures 10 & 11 illustrates the 2 most common types of Ceiling Support Installation.

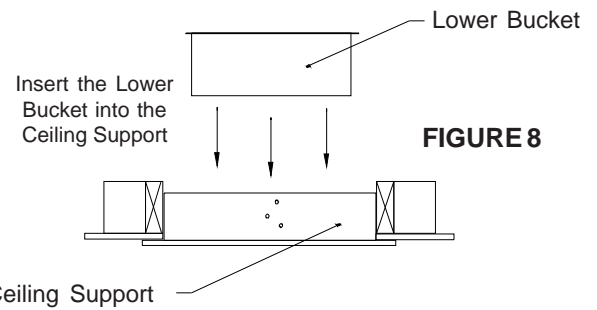
Frame (on all 4 sides) a level square opening with the inside dimensions 14-1/4" (362 mm) square.

With the Lower Bucket removed, place the Ceiling Support Assembly into the framed opening from below at the ceiling level (see Figure 7).



Drive one nail, 1-1/2" common or spiral, part way into each of the four (4) nailing areas of the support. Check that the trim plate is level and flush (see Figure 7). You may substitute in lieu of nails #8 x 1-1/2" wood screws.

Finish nailing through all the pre-punched holes (12 nails total) and fasten the finishing plate onto the ceiling with the 4 supplied black wood screws. Replace the Lower Bucket into the Ceiling Support (see Figure 8).



SMOKE PIPE ADAPTER (SPA)

The stub end (crimped) of the Smoke Pipe Adapter is intended to fit inside of the connector pipe from a solid fuel appliance, thus preventing condensate drips at the chimney connection.

Install inter-connecting stove pipe following appliance manufacturer's instructions and appropriate building code requirements keeping in mind that the stove pipe run should be as short and straight as possible and secured in place with a minimum of 3 sheet metal screws per joint. Generally, for a wood burning appliance installation, an 18" minimum clearance to combustibles must be maintained for the stove pipe. NOTE: The exception to this is a double wall stove pipe, such as Selkirk's Model DSP which can be installed at reduced clearances to combustibles. See separate installation instructions for more details.

BEFORE LOWERING THE FIRST CHIMNEY LENGTH:

The Basecap Assembly with the short crimped Smoke Pipe Adapter must be inserted into the female end of the first length (see Figure 9a).

- Insert the short portion of the short crimped Smoke Pipe Adapter into the Basecap.
- Ensure the Basecap portion is located on the inside of the exterior casing of the insulated chimney (flush to the bottom of the inward bead) and the Smoke Pipe portion is located over the inner liner of the Chimney Length (see diagram 9b).

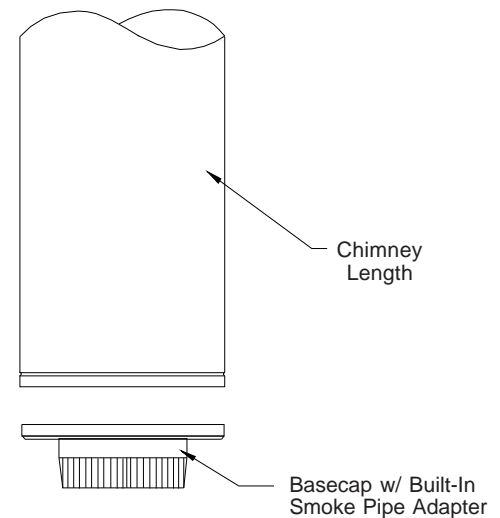


FIGURE 9a

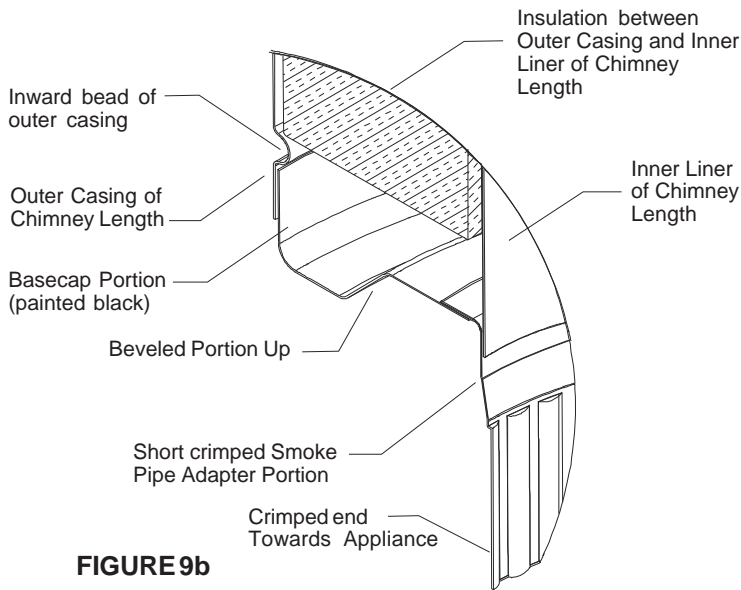


FIGURE 9b

Lower the prepared Chimney Length into the Lower Bucket. Ensure that the Chimney Length rests on the Lower Bucket into the Ceiling Support (see Figure 9c).

NOTE: Any length of CF Sentinel Chimney can be used. There is no special "Starter" length required with the Ceiling Support. Make sure the length is long enough to be above the floor level or above the Attic Insulation Shield. Continue adding chimney lengths until a height of about 2 feet below the next ceiling level is achieved.

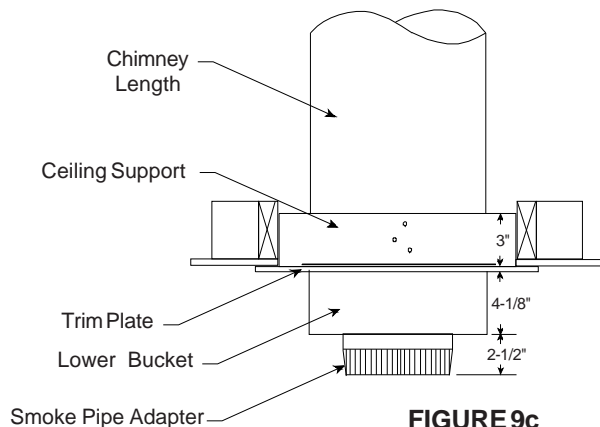


FIGURE 9c

FIRESTOPPING

Firestopping is required at every joist level. Wherever a chimney passes through a ceiling or floor, through a wall, or into an enclosure, it must be firestopped. No firestopping is required in conjunction with a Ceiling Support installed as shown in Figures 11, the Ceiling Support provides the firestopping.

A fire stop performs the following essential functions for both dwelling and the chimney:

- Together with a fully framed opening (all four sides), it controls vertical and horizontal spread of any fire external to the chimney.
- It stabilizes the chimney in the framed opening and defines and maintains the required AIR SPACE clearance to combustibles.
- It reduces heat losses from the dwelling by blocking vertical air circulation in the space around the chimney.
- When located at a ceiling below a roof flashing (or below a roof support) it helps provide stability for chimney extending above the roof.
- At the level where the chimney penetrates the air/vapour barrier, special attention is required. Seal the vapour barrier to the Ceiling Support, Attic Shield (Joist Shield if the chimney is enclosed in the attic) or Wall Thimble using an appropriate caulking compound as per the requirement of local authorities.

FIRESTOP JOIST SHIELD (JS)

A Firestop Joist Shield (JS) must be installed where the chimney passes from one living space to another living space as shown in figure 11. It is designed to provide proper firestopping between floors and to keep direct radiation from the chimney away from the joist framing.

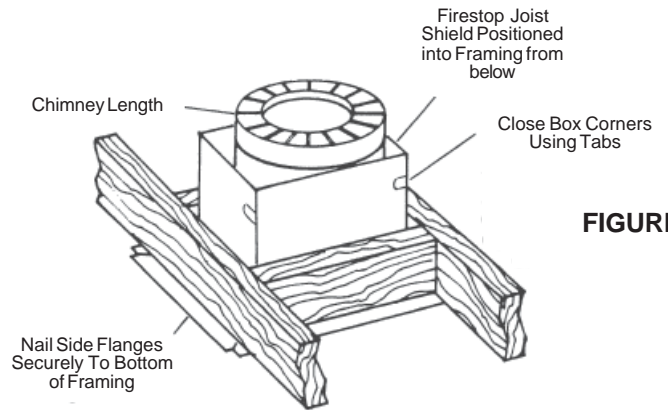
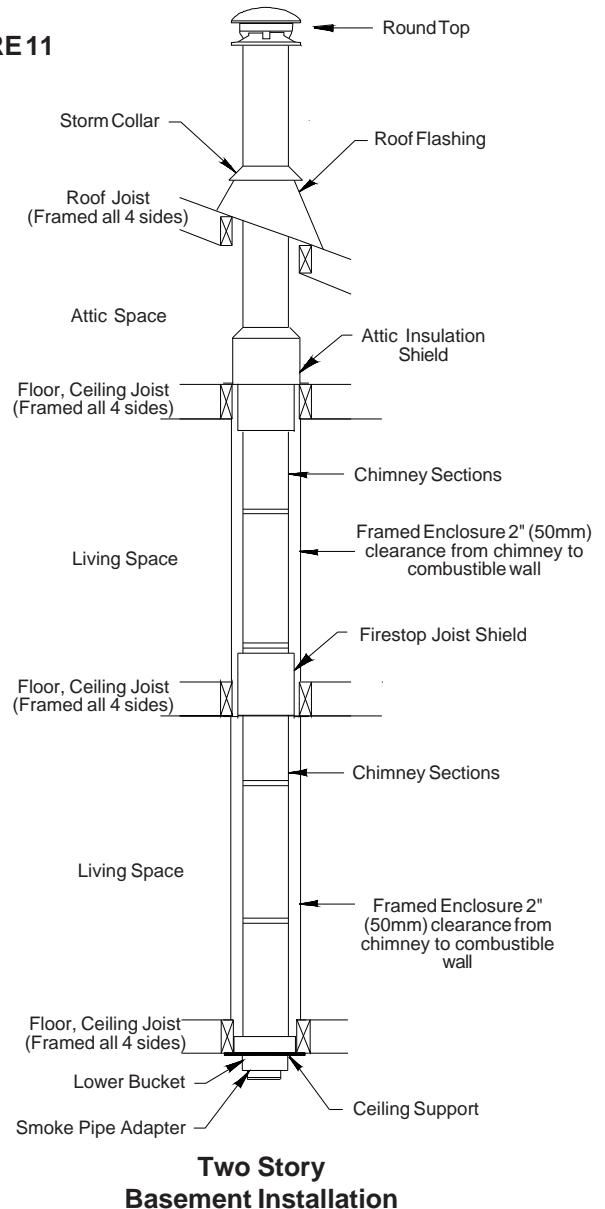


FIGURE 10

FIGURE 11



**Two Story
Basement Installation**

Fully frame a level square opening (all four sides) for 2" (50mm) clearance from the outside of the chimney to the inside of the frame. Place the Firestop Joist Shield (JS) up into the framed opening from below the joist framing and nail in place using 1" spiral nails as per Figure 10. Ensure no insulation or debris is within the 2" air space clearance around the chimney. This includes the air spaces between the Firestop Joist Shield (JS) and the joist framing.

When the chimney is enclosed in the attic area, a Firestop Joist Shield (JS) must be installed at the ceiling level. If the base of the Firestop Joist Shield (JS) does not fit flush with the ceiling frame, measure the distance that the base is sitting below the framing and trim that amount off the top of the Firestop Joist Shield (JS) before securing into place.

ATTIC INSULATION SHIELD (AIS)

The Attic Insulation Shield (AIS) provides 2 features: it comes fully assembled with a built-in telescoping bottom shield, eliminating the need for field assembly. The function of the Attic Insulation Shield (or a complete enclosure) is to keep insulation from coming into contact with the chimney. Certain insulations made of cellulose fiber (old newspapers, processed wood) may ignite and smolder due to heat trapped by contact with the chimney. When this smoldering fire reaches ordinary wood framing, a flaming fire may result. However, even without a flame, a smoldering fire may create noxious gases and cause great property damage.

An Attic Insulation Shield (AIS) must be installed where the chimney enters an attic space. The Attic Insulation Shield is designed to keep insulation materials from coming into contact with the chimney and will protect up to a 10 inch (250mm) thickness of insulation plus the depth of the ceiling joists. If insulation is blown in and adheres to the chimney pipe, it should be brushed off to eliminate any possible contact of this material with the chimney when it is in use.

The height of the AIS must accommodate the amount of insulation as required by the National Building Code. Where height restrictions will not permit the use of the Attic Insulation Shield, it is permissible to construct an enclosure with the required minimum air space clearance of 2" (50mm) to the chimney all the way to the underside of the roof deck. In this application you will install a Firestop Joist Shield (JS) at the ceiling level, with the exception of a Single Story Installation (see Figure 13).

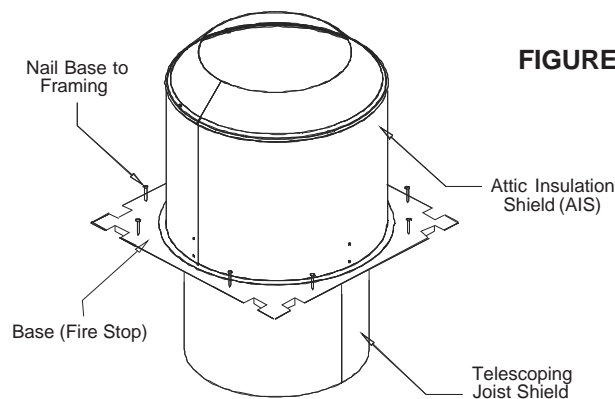


FIGURE 12

For proper installation, the attic opening must be fully framed at 2 inches of clearance to the chimney pipe with framing material of the same dimension as the ceiling joists (as per Framing Dimension Table 2). The tabs on the base plate of the AIS are inserted in the framed opening around the chimney. **NOTE: This only applies to the 6" AIS. On the 7" and 8" AIS, the tabs will require to be flattened out and the AIS centered over the framed opening.**

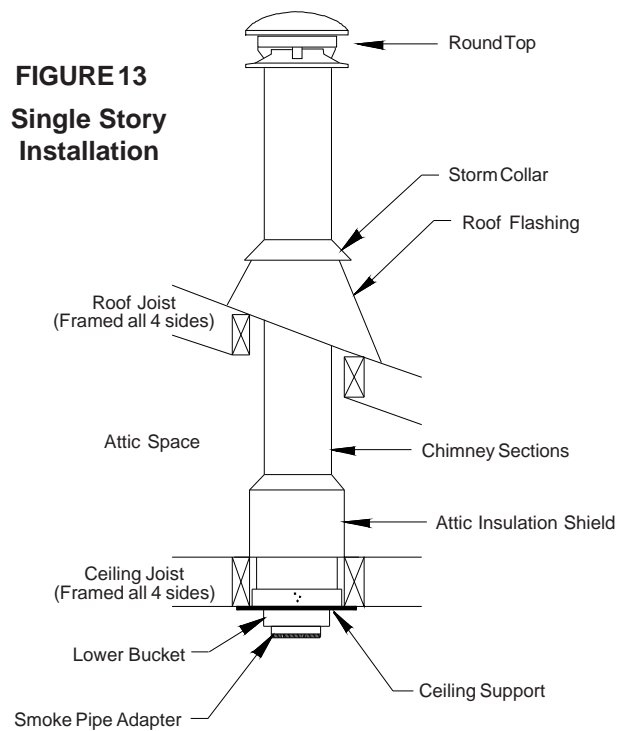


FIGURE 13
Single Story Installation

Nail the AIS base to the framing dimensions with at least 2 per side using 2d (1") spiral nails or 1" x #8 wood screws.

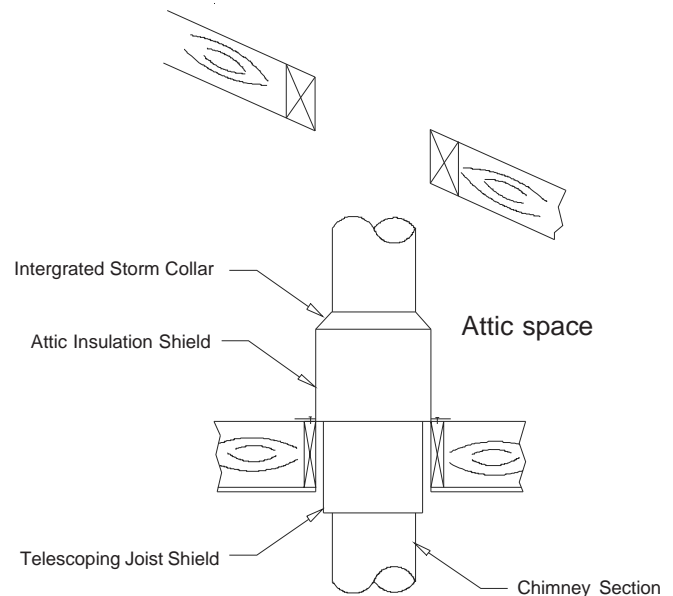


FIGURE 14 - Attic Insulation Shield

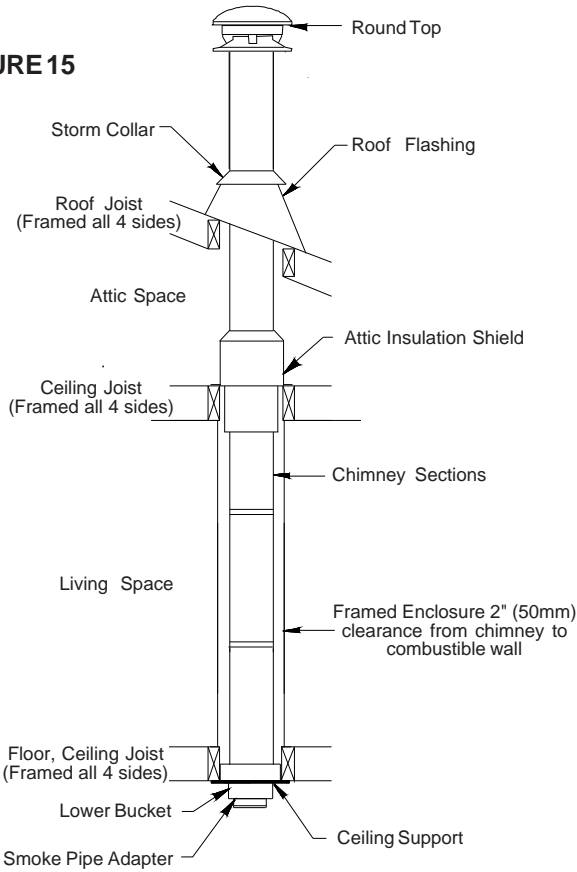
TABLE 2	Framing Dimensions for Attic Insulation Shield		
DIAMETER OF CHIMNEY	6"	7"	8"
FRAMED OPENING	14-1/4 x 14-1/4 362 x 362	15-1/2 x 15-1/2 394 x 394	16-3/4 x 16-3/4 426 x 426

When an Attic Insulation Shield is required above the Ceiling Support into an attic as shown in Figure 13, ensure that the base of the shield is flush with the top of the joist framing and nailed in place. The telescoping portion of the AIS will eliminate the need to trim the bottom when installed immediately above this support. When fully extended, the AIS will also provide joist shielding when installed in a 2 story main floor or basement applications (see Figures 11 & 15).

NOTE: At the level where the chimney penetrates the air / vapour barrier, special attention is required. Seal the vapour barrier to the Ceiling Plate of the Ceiling Support, Wall Thimble or Attic Insulation Shield using an appropriate caulking compound as per the requirement of local authorities.

NOTE: To reduce cold air infiltration into the dwelling you can install the optional Universal Shielding Insulation (SUSI) into the Attic Insulation Shield. See separate installation instructions.

FIGURE 15



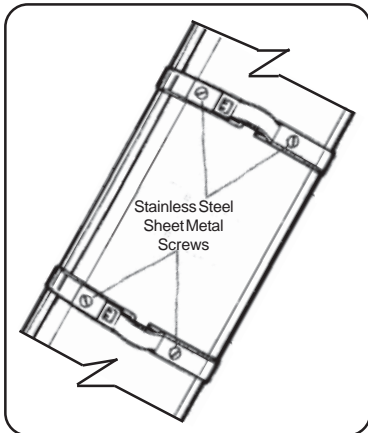
**Two Story
Main Floor Installation**

ELBOW INSTALLATION

Two pairs (four) of 15° or 30° elbows may be used in an interior installation to provide an offset in order to avoid cutting of joists and to clear other obstructions.

Locking bands must be used at each joints. For added security when forming an offset, it is required to fasten the joints using two (2) X6 x 1/2" stainless steel sheet metal screws through the pre-punched holes in the locking bands (see Figure 16).

FIGURE 16



The maximum permissible angle with solid fuel CF installation is 30 degrees. Combining offsets for greater angle is not permitted. The vertical run of chimney above an offset must be supported using an Interior Resupport Assembly. Each Interior Resupport Assembly will support 30 feet (9 m) of chimney and the maximum length of chimney allowed between the elbows is 6 feet. See Chart 1 for Offset Chimney Installation at the back of these instructions for more information.

Never install an elbow in a joist area. Chimney sections must pass vertically through a framed joist areas. During installation provide supplementary support for the offset section to avoid undue stress on connected elbows.

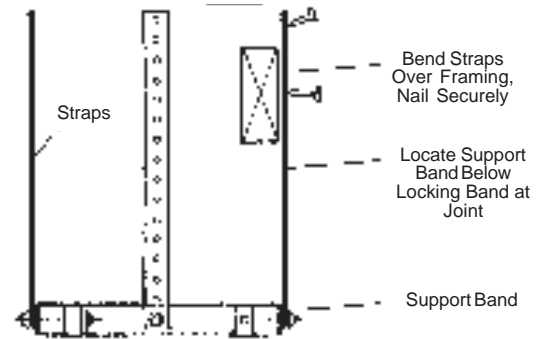


FIGURE 17

Install a Resupport Assembly on the vertical length just above the highest elbow. Securely clamp the Support Band to the chimney just above the locking band at the joint. Attach the Support Straps to the Support Band assembly and nail the Support Straps to the framing using 1-1/2" nails or #8 x 1-1/2" wood screws (2 per straps). See Figures 17 and 18.

The weight carrying capacity of the support, which depends on the angle of the straps, and the security of attachment is adequate for 9 m (30') of Model CF Chimney pipe.

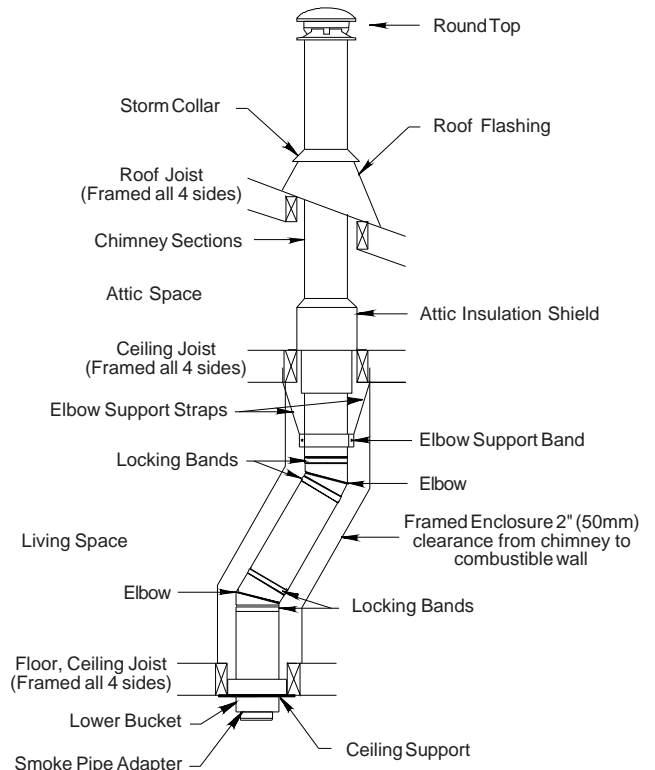


FIGURE 18 Offset (Elbow) Installation

WALL SUPPORT (WSP)

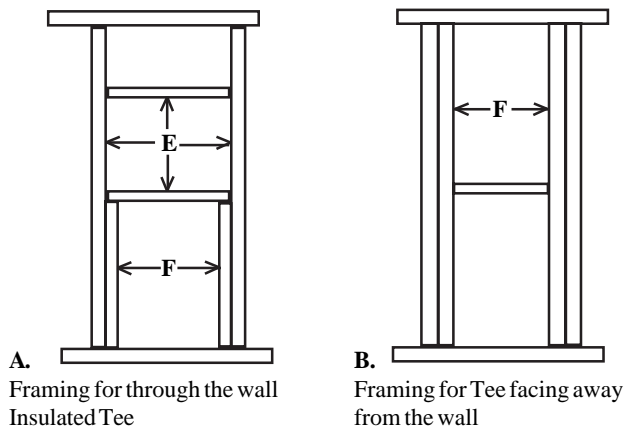
To complete a proper Wall Support installation, the following parts may be required:

- Wall Support Package: - Intended for a through-the-wall installation where the chimney has a lateral connection.
- Adjustable Roof Flashing: - Required when the chimney penetrates a roof or a roof overhang.
- Insulated Tee: - Required when the chimney is installed through and along a vertical wall either on the exterior or interior.
- Wall Bands: - Required to provide lateral support to the chimney.
- Suitable lengths of chimney: - The chimney diameter should be sized to suit the appliance.
- Interior Wall Plate and Exterior Wall Plate: - Required when going through a combustible wall.
- Insulated Wall Thimble: - Required to satisfy through-the-wall installation where framing an opening may not be practical.
- Round Top: - To exclude rain and/or leaves into the chimney.

The CF Sentinel Adjustable Wall Support will support up to 40 feet (12.2 m) of chimney, all of which must be above the support.

1. Determine the center line of the lateral connection (horizontal length through the wall) and frame in your opening to the dimensions specified in Table 3. For a non-combustible wall (concrete block or poured foundation), cut a hole 1/8" greater than the outside diameter of the chimney as per Table 3. **DO NOT PLACE ANY LOOSE INSULATION** around the horizontal chimney length within the framed opening when using a Wall Plate Spacer or Insulated Wall Plate Spacer. Maintain the required minimum 2" (50mm) air space clearance to combustible materials.

Chimney Size	Hole Non Combustible	E	F
		Framed Opening Combustible	Framing For Bracing
6"	10-5/8" (270mm)	14-1/2" (369mm)	11-1/2" (292mm)
7"	11-7/8" (302mm)	15-3/4" (400mm)	12-3/4" (324mm)
8"	13-1/8" (334mm)	17" (432mm)	14" (356mm)



2. Assemble braces, brackets and angles to the base plate using 1/4" nuts and bolts, with braces up or down as necessary (**DOWN IF CHIMNEY GOES THROUGH WALL**) as per Figure 19 & 20a and if it is an interior wall support installation (Figure 20b).

3. Nail brackets and angles to framing temporarily making sure that the base plate is level (and positioned to allow for the installation of the wall plates, if the chimney goes through the wall).

4. Mark, and drill 5/32" pilot holes in the framing for the lag screw location, or install masonry anchors in proper locations.

5. Remove nails, install lag screws or anchor bolts in all the holes and tighten all bolts in the assembly.

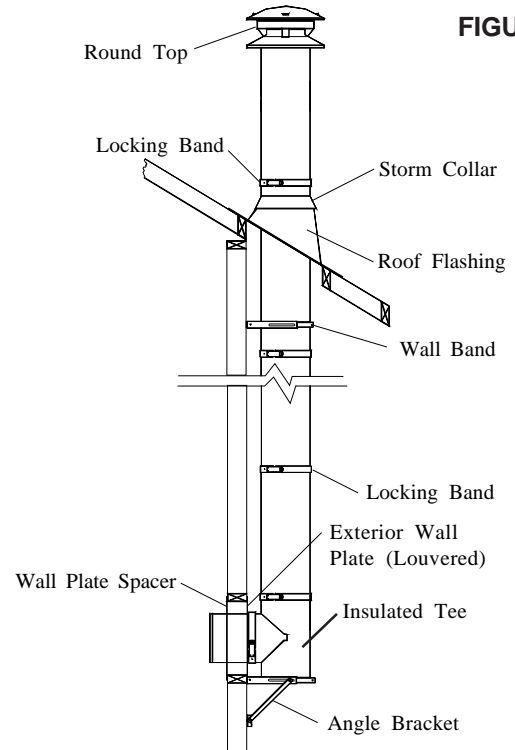


FIGURE 19

6. If the Tee is located on an outdoor wall, place the exterior wall plate over the horizontal Tee branch, and attach an appropriate insulated chimney length to the Tee branch. Secure in place with the supplied locking band. Ensure that the clasp of the locking band is facing down to prevent any water from collecting in the locking band if locking band is positioned on the exterior of the wall. **NOTE:** Interior or Exterior Plates can be substituted with the Insulated Wall Thimble. In a combustible wall the opening must be framed in (see Table 3).

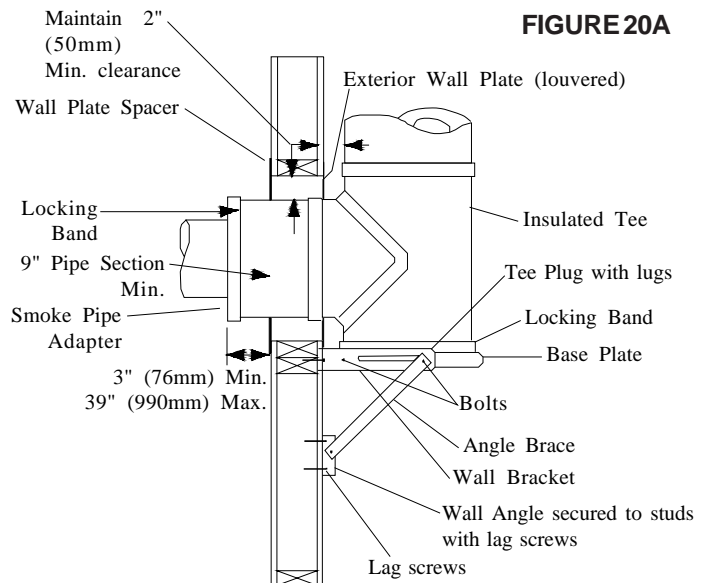
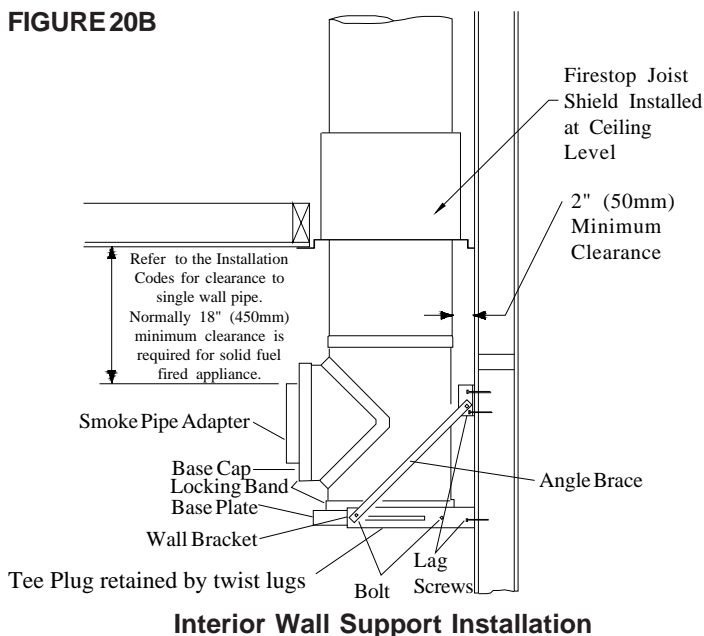


FIGURE 20A

Exterior Wall Support Installation

NOTE: THE CHIMNEY MUST EXTEND AT LEAST 3" (75 MM) INTO THE LIVING SPACE WHERE THE SMOKE PIPE ADAPTER WILL BE ATTACHED TO THE CHIMNEY BRANCH.

FIGURE 20B



Interior Wall Support Installation

7. Place this whole assembly (Insulated Tee, Chimney Length and Exterior Wall Plate) into the wall opening and onto the base to check centering and clearances. Make sure there are no interferences. If the Tee is outdoors, keep in mind that the louver openings in the Exterior Wall Plate must be down to keep the rain out.

8. If the Tee and the Chimney will be fully enclosed in a chase or shaft or the wall is non-combustible, the exterior wall plate need not be used.

9. After checking fit, secure Tee to integral basecap of base plate with a locking band. Install the Tee Plug and turn the two (2) twist lugs.

10. Use a non-hardening high-temperature sealant (500°F) to seal around the exterior portion of the horizontal chimney length where it enters one of the following: Exterior Wall Plate, Insulated Wall Thimble or a concrete wall.

11. **NOTE:** Only CF Sentinel chimney must extend through-the-wall. Use the Wall Plate Spacer (or the interior portion of the Insulated Wall Thimble) on the interior wall to center and support the horizontal extension. Remember that the chimney pipe length selected must extend at least 3" (76mm) beyond the wall and must be centered in the wall opening. The maximum length of pipe out from the wall is 39" (990mm).

12. Chimney lengths above the Tee are simply stacked and secured in place with the supplied Locking Bands.

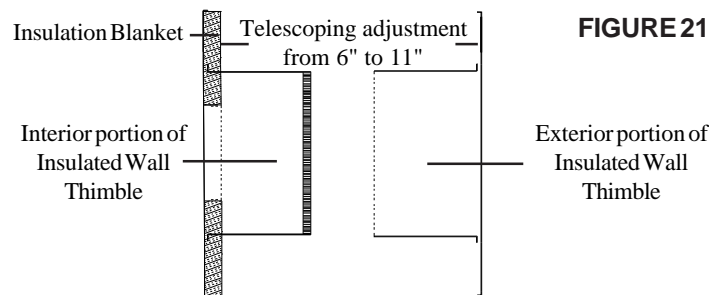
13. To ensure chimney stability above the wall support, Wall Bands must be used at every 8 to 12 feet (2.4 to 3.6m) intervals above the support.

NOTE: If complete framing of the vertical wall opening is not practical, the Wall Plate Spacer and the Exterior Wall Plate must be substituted with an Insulated Wall Thimble (see Figure 21). It is designed for use in accommodating unframed openings while maintaining the chimney's required 50mm (2") air space clearance to combustibles.

- Install the Wall Thimble before installing the Wall Support assembly.

- Ensure that the proper framing dimensions is respected below the opening to accommodate the Wall Support (see F "Framing for Bracing" in Table 3).

- If wall thickness is less than 6 inches, trim round inner shield accordingly.
- Install thimble before installing the Wall Support assembly.
- Insert the 2 halves from opposite sides of the wall. The painted/insulated section is to be installed from the interior side. Secure using the supplied black screws.
- The unpainted/exterior half has the larger diameter shield and simply slides over the interior half. Fasten to wall with suitable fasteners.
- Seal the perimeter of the exterior plate using an appropriate exterior sealant.



Insulated Wall Thimble

NOTE: To reduce cold air infiltration into the dwelling you can install the optional Universal Shielding Insulation (SUSI) into the Insulated Wall Thimble. See separate installation instructions packaged with the SUSI.

WALL BAND INSTALLATION (WB)

1. The required 2" (50mm) minimum clearance is established by the 1-3/4" center (carriage) bolt. Place the 1-3/4" carriage bolt through the center offset of the band half nearest the wall. Place single hole ends of the perforated straps over this bolt. Install nut tight against strap so that straps are horizontal (as per Figure 22).

2. Clamp the two halves of the support band around the chimney pipe using the long bolts through the band end tabs. First install the pivot screws.

3. Place the wall brackets (long slotted parts) over the pivot screws projecting out from the end tabs and hand tighten.

4. Line up the perforated straps and wall brackets, then mark position on wall for lag screws or anchors to go through both the straps and brackets.

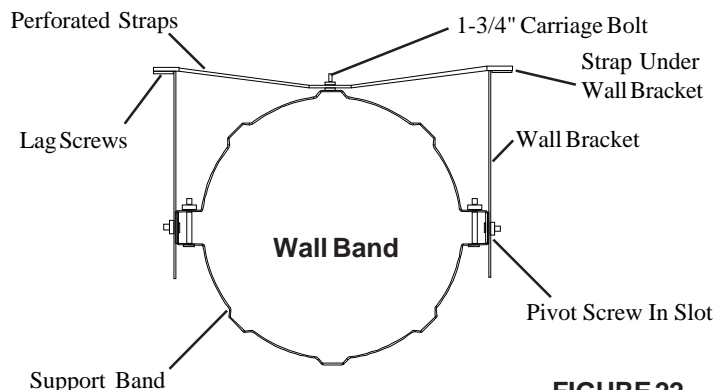


FIGURE 22

5. Install lag screws or anchors and tighten pivot nuts. When all bolts and straps are secured in place around the chimney, the chimney will be stabilized against horizontal displacement.

NOTE: If the chimney penetrates an overhang (soffit) cut an opening with 2" clearance all around and install a Joist Shield on the under side of the overhang. If the attic is open to the overhang, close off the access with suitable building materials ensuring that a 2" (50mm) air space is maintained. From above install a roof flashing and storm collar by following the Roof Flashing installation section. If the overhang is not deep enough to allow the chimney to be fully installed within the overhang, it will be necessary to cut away the overhang. Ensure that a 2" (50mm) clearance all around the chimney is respected. Framing and flashing the sides of the opening will be required. Install a Wall Band at this level.

CATHEDRAL CEILING SUPPORT (CCB)

To complete a proper Cathedral Ceiling Support installation, the following parts are required:

- Cathedral Ceiling Support: - Includes a painted black support box, a two-piece support band, 4 painted ceiling trim angles (2 short, 2 long), decorative sleeve, smoke pipe adapter and hardware package.
- Roof Flashing Assembly:- Required when the chimney penetrates a roof.
- Suitable lengths of chimney: - The chimney diameter should be sized to suit the appliance.
- Round Top:- To exclude rain and/or leaves into the chimney.

The CF Sentinel Cathedral Ceiling Support will support a total of 15 feet (4.6m) of chimney, of which 10ft (3m) can be supported below the box. When a chimney is suspended below the box, the locking bands and joints must be fastened using two (2) #6 x 1/2" stainless steel sheet metal screws (drill 3/32 holes) as per Figure 23.

The Cathedral Ceiling Support Box is manufactured to an overall outer dimension of 1/8" (6mm) less than the minimum dimensions specified in the Framing Details section (Table 1) and 17-1/2" (444mm) in height.

After framing in your opening to the dimensions specified in the Framing Details section, slide the Cathedral Support box into the joist opening. Once the box is at the desired level, ensure that the box is level and nail the box to the framing using three 2" spiral nails or #8 x 1-1/2" wood screws per side. The excess material sticking above the roof can either be trimmed off before attaching the box to the framing or, after it is installed, the corners can be cut and the excess material folded down and secured onto the roof deck.

Install the Support Band on the chimney length at the desired position by assembling the support bands using the 2 carriage bolts and nuts. **NOTE: A minimum of 4" of an insulated chimney length must protrude below the Cathedral Support Box for stability** (see Chart 3 at the back of these instructions for more details). Snug nuts to bolts, do not over-tighten so that the band deflects the chimney outer casing. Secure the band to the chimney outer casing by screwing the eight (8) stainless steel sheet metal screws through the draw band and into the outer casing (for ease of attachment use a 3/32" hole). Lower the chimney length down through the opening in the bottom of the Support Box, so that the Support Band makes contact with the bottom of the Support Box (See Figure 23). **NOTE:** The male end

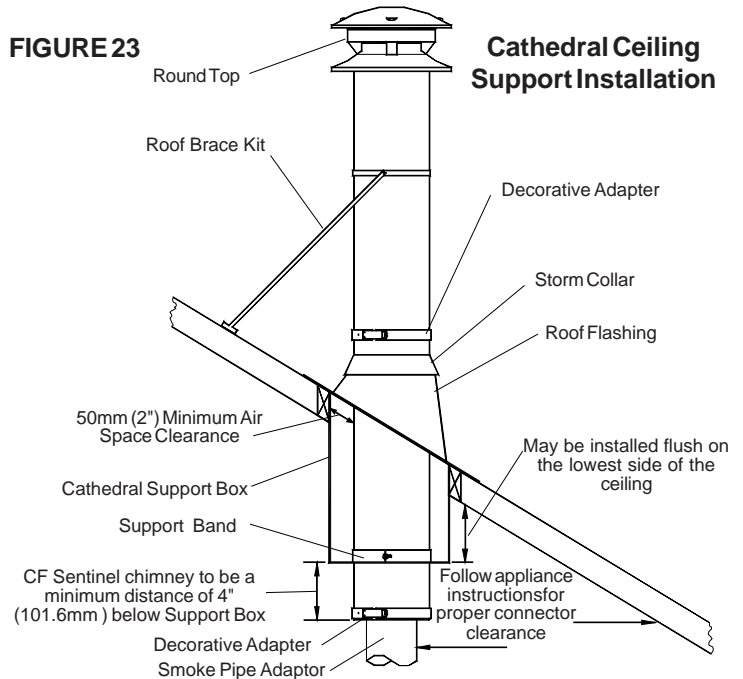
of each chimney length must be pointing upwards as per the arrow on the chimney label.

Install the 4 painted ceiling trim angles with the supplied fastening screws to finish off the Support Box at the ceiling level.

The bottom chimney length(s) must protrude into the living space so that proper clearances are maintained from the stove pipe connector to the lower side of the ceiling (see Chart 3 in the back of these instructions for more details). Do not offset the CF Sentinel chimney below the Cathedral Ceiling Support Box.

Install additional chimney lengths with locking bands until the required height above the roof is achieved. **NOTE:** As previously mentioned, when a chimney is suspended below the box, locking bands and joints must be fastened using two (2) #6 x 1/2" stainless steel sheet metal screws (as per Figure 4).

FIGURE 23



NOTE: To stop cold air infiltration into the dwelling you can install the optional Universal Shielding Insulation (SUSI) into the Cathedral Ceiling Support. See separate installation instructions packaged with the SUSI.

ROOF SUPPORT (URSA)

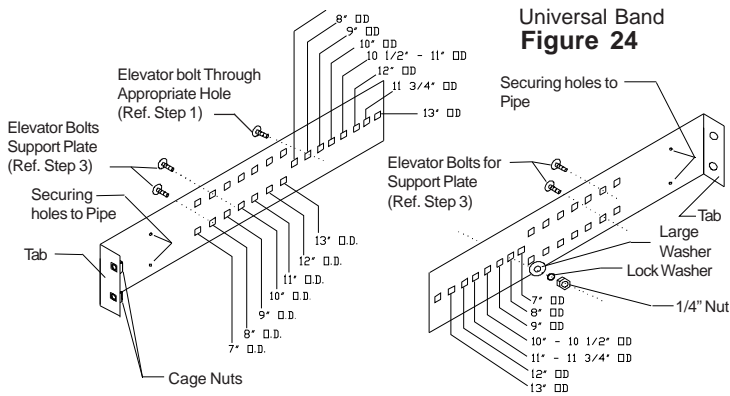
The Universal Roof Support Assembly (URSA) is designed to provide support and may be used on a floor, above a ceiling or roof and adjusts to any roof pitch. It may also be used above an offset to support the offset or as a supplementary support when the chimney or vent height exceeds that of the primary support. Where permitted, it will provide support above freestanding appliances and open cathedral ceiling installations.

The Universal Roof Support Assembly (URSA) accommodates most models of chimneys with outer diameters ranging from 7" through 13".

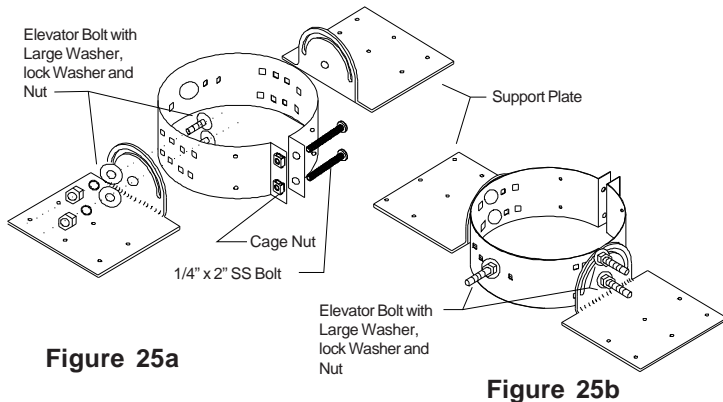
The URSA will support up to 30' (9.0m) of chimney of which 20' (6.9m) may be suspended beneath it.

To Install:

- Place the two halves of the URSA Band as shown in Fig.24. Insert elevator bolts through the single row of holes identified with the outside diameter of the chimney being installed, (Ex. - for an 8" OD chimney, place the elevator bolt through the holes identified for 8" OD). The flat head of the bolt should be oriented opposite the direction the formed tabs are pointed. Secure the center bolt with washers and nut (see Figure 24).
- Form the Band into a circle and loosely connect both tabs using the supplied 2" bolts into the 2 cage nuts (see Figure 25a).
- Attach the Support Plates to the band with flat head bolts (2 sets per plate) washers and nuts. The bolts should pass through the holes in the band corresponding to the pipe outside diameter and secured loosely (see Figure 24 & 25A). NOTE: 2 sets per Support Plates.



- Place assembly around the length of pipe and loosely tighten the tabs with the screw and nut referenced in Step 2. Move the assembly to the desired height location on the pipe. Firmly tighten bolt and nut to secure the band around the pipe.
- Secure URSA to the length of pipe by using four (4) 1/8" x 1/2" stainless steel self-tapping screws (provided) through the 2 securing holes found closest to the tabs on the band (see Figure 24).
- The URSA is mounted directly on the roof sheathing with its Support Plate resting over rafters or a framed opening to form a solid base. Frame a rectangular roof opening to ensure a good distribution of weight load. Be sure to allow for a minimum of 2" airspace clearance to combustibles as shown in Figure 26. Reference the main chimney installation instructions for frame specifications and other details.



- Center the assembly in the opening. Adjust Plates to the pitch of the roof and tighten the nuts (see Figures 25b & 26).
- Install six wood screws (#10 x 2-1/2") per plate with the innermost going into rafters or headers.
- Add additional lengths of pipe as necessary, above and/or below.
- Complete installation of the Flashing, Storm Collar and Round Top as per main installation instructions.

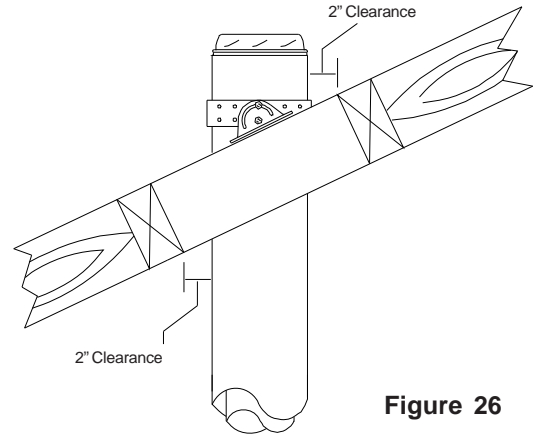


Figure 26

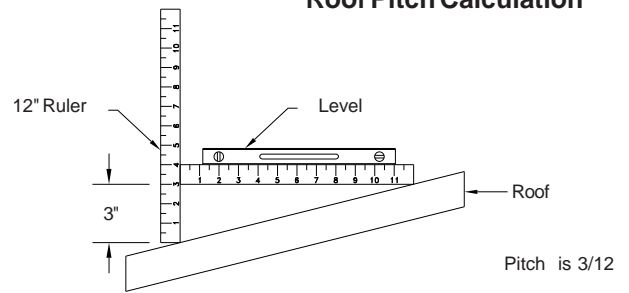
ROOF FLASHING: (FRA)

Ensure that you have the proper roof flashing by checking your roof pitch using a level and two rulers (see Fig. 22) or by using a roof pitch card.

The FRA-A flashing is for roof pitches from 0/12 to 6/12.
The FRA-P flashing is for roof pitches from 7/12 to 12/12.

FIGURE 27

Roof Pitch Calculation



Frame a RECTANGULAR opening to suit the pitch of the roof and ensure that a 2" (50mm) minimum clearance is maintained to combustibles.

In new construction, slide a Roof Flashing Assembly suitable to your roof pitch over the chimney.

On an existing roof, center and install the flashing before extending the chimney above the roof. Do not nail the flashing to the roof yet.

NOTE: Prepare roof area by removing shingle nails and cutting roofing material allowing 2" clearance to the chimney. Slide the top edge (nearest the roof peak) of the flashing suitable for the roof pitch under the roofing shingles. At least half of the flashing sides should be UNDER the shingles and the lower end OVER the shingles to provide a watershed. Trimming off the shingles may be necessary around the

of the flashing for a better fit. Ensure that the chimney is level and plumb before nailing flashing to the roof. Nail flashing to the roof deck (under the shingles) along the upper edge and down each side with 12 nails with neoprene washers or cover the nails with a suitable non hardening waterproof caulking . Seal the shingles to the plate in the same manner. As a precaution, apply a bead of caulking along all seams of the flashing above the roof as per Figure 28.

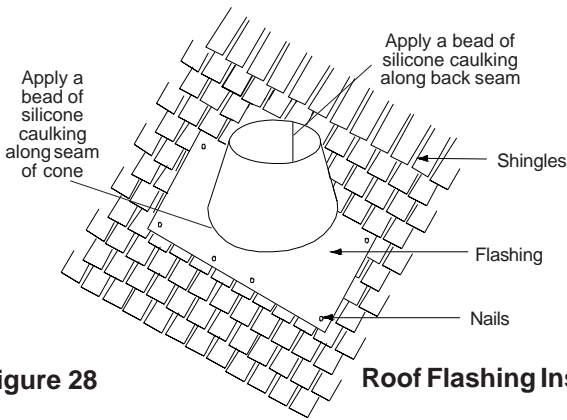


Figure 28 Roof Flashing Installation

Apply non-hardening high temperature silicone caulking just above the top of the flashing cone where it meets the chimney outer casing. Slide the tab end of the storm collar into the slot end. DO NOT BEND THE TAB OVER YET. Slide the collar down the chimney until it contacts the flashing and the caulking. Bend the tab back over the slot for a snug fit. Apply additional caulking above the storm collar as required.

On steep roofs, it is recommended that an ice deflector or cricket fabricated from heavy-gauge galvanized steel be installed. The wedge-shaped deflector is installed against the chimney on the upper slope. Its function is to split ice and snow as they slide down the roof, preventing damage to the chimney. This is not a supplied item. Contact a sheet metal fabrication shop in your area for your custom ice deflector.

The flashing and storm collar should be painted to match the roof shingles. This will extend its life and improve the appearance. The chimney may be painted also with a HEAT RESISTANT paint. To improve adhesion to the CF Sentinel chimney, degrease, clean, prime before painting. Follow the paint manufacturer's instructions.

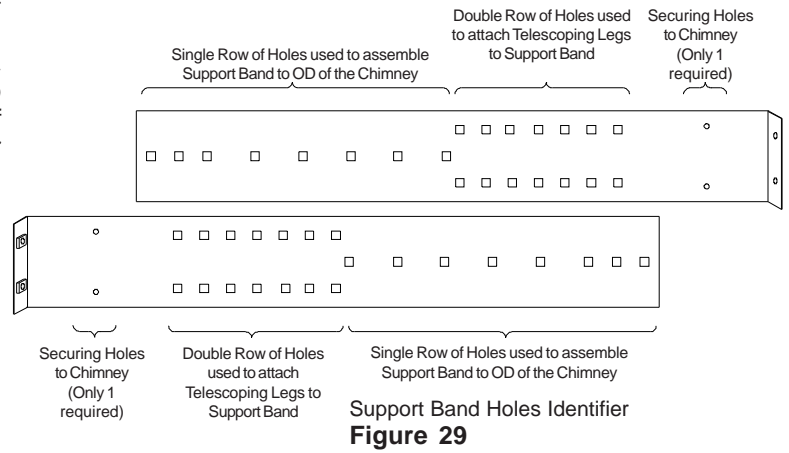
Continue adding chimney lengths until the proper height is achieved (See figure 30). Install the Round Top as per the instructions under the Round Top section.

ROOF BRACE KIT (URBK)

If the chimney extends 5 feet or more above the roof deck, a Universal Roof Brace Kit is required (see Figure 35).

The Universal Roof Brace Kit (URBK) will provide lateral support to the chimney above the roof line. The URBK is required when the chimney extends 5 feet (1600mm) or more above the roof penetration. The URBK contains Telescoping Legs, Support Band, Roof Angle Brackets and hardware package.

The Universal Roof Brace Kit (URBK) accommodates most models of chimneys with outer diameters ranging from 7" through 13".



- A. Measure the outside (OD) diameter of your chimney.
- B. From the single row holes (see Figures 29 and 30), select the hole in each halves that corresponds to the outside diameter identified by the chimney being installed. Place the two halves together. Insert an elevator bolt through the chosen holes (Ex - for an 10" OD chimney, place the elevator bolt through the holes identified for 10" OD). The elevator bolt should be oriented opposite the direction the formed tabs are pointed. Secure the center bolt with washers and 1/4" flanged nut (see Figure 31). NOTE: On smaller diameter chimney the excess band material can be cut off.

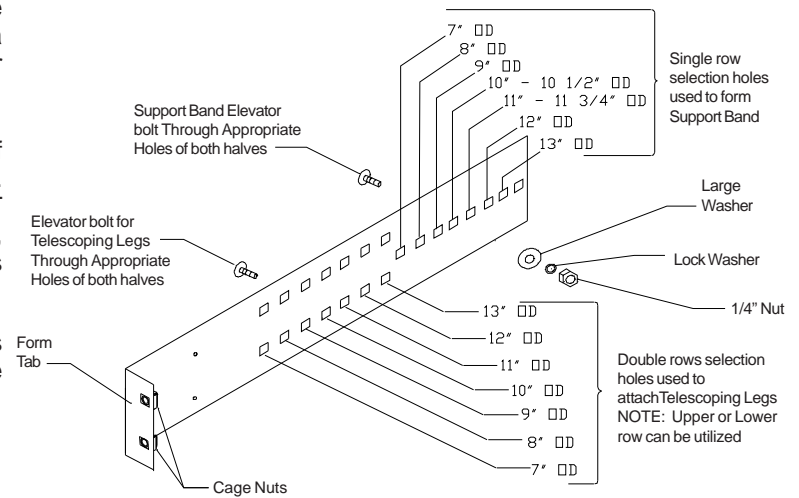


Figure 30 Assembly of Universal Support Band (2 Halves)

- C. Form the band into a circle and loosely connect tabs using the supplied 2" bolts into the 2 cage nuts located on 1 form tab.

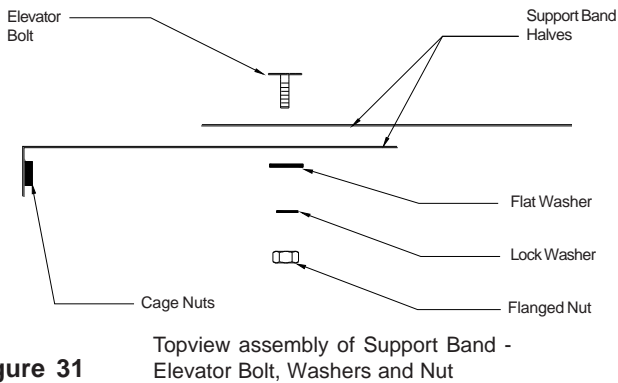


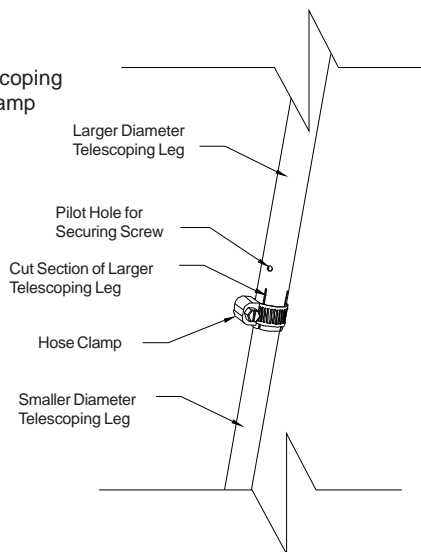
Figure 31

- D. From the double rows of holes (upper or lower row) select the hole in each halves that corresponds to the OD of the chimney. Insert 2 elevator bolts (1 per side) through both holes.
- E. Position the Support Band approximately two thirds of the way up the chimney height (see Figure 35). The preferred location is next to a joint, immediately above or below a Locking Band. Secure Support Band by tightening the 2" bolts.

NOTE: Only one chimney joint should be above a Roof Brace Kit, the addition of a secondary one may be required.

- F. Assemble the telescoping legs by sliding the supplied hose clamp over larger diameter leg and then inserting smaller diameter leg into larger diameter leg. Temporarily hold legs together by tightening the hose clamp over the cut section of larger diameter leg (see Figure 32). Repeat for the other telescoping leg assembly.

Figure 32



- G. Attach each of the telescoping legs (angled end) to the 2 elevator bolts on the Support Band with supplied washers and nut (see Figure 33).
- H. Attach one end of each telescoping leg assembly to each of the Angle Brackets using one (1) 1/4-20 X 1" bolt and nut (see Figure 34).

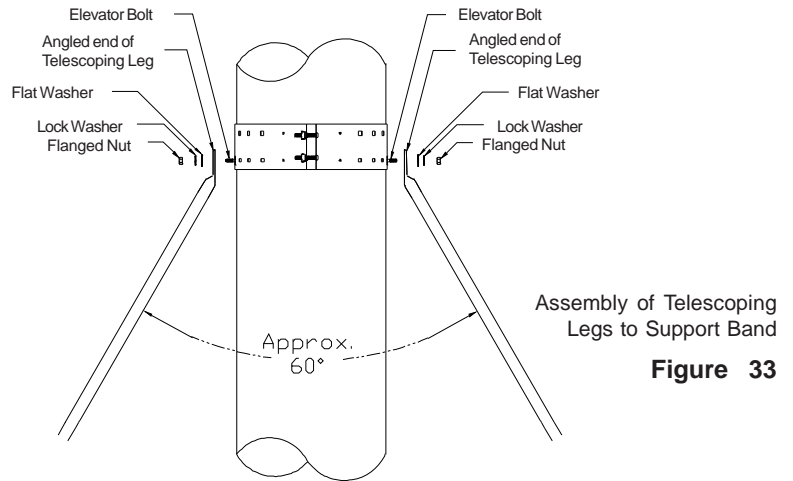


Figure 33

- I. Determine the location of the two Angle Brackets on the roof structure. Ensure the fasteners are into rafters or framing and not just roof sheathing. Secure the Angle Brackets to the roof structure using two (2) 1/4 X 2" lag screws per brackets (see Figure 28). Seal the roof with a suitable non-hardening waterproof caulking.
- J. Make sure the chimney is level and plumb. Check all required dimensions and angles, adjust if necessary. For added security, you may lock in place the telescoping legs by using 1/8" x 1/2" stainless steel self tapping screw (supplied) through the pilot holes found near the hose clamps (Figure 32). Secure the Support Band to length of pipe by using four (4) 1/8" x 1/2" stainless steel self-tapping screws (supplied) through the 2 securing holes found closest to the tabs on the band (See Figure 29). Cover screw heads with a suitable caulking.
- K. The two telescoping legs should form an angle of about 60° to give support to the chimney in all directions. The angle of the telescoping legs should not be more than 45° from horizontal when fastened to the roof (see Figures 33 & 34).

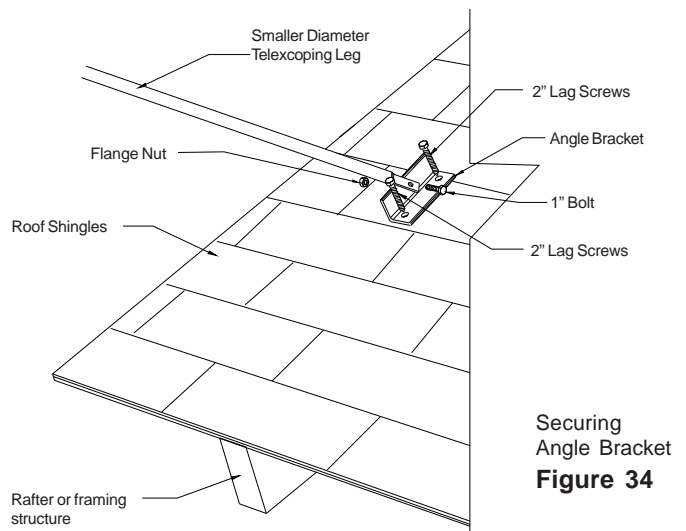
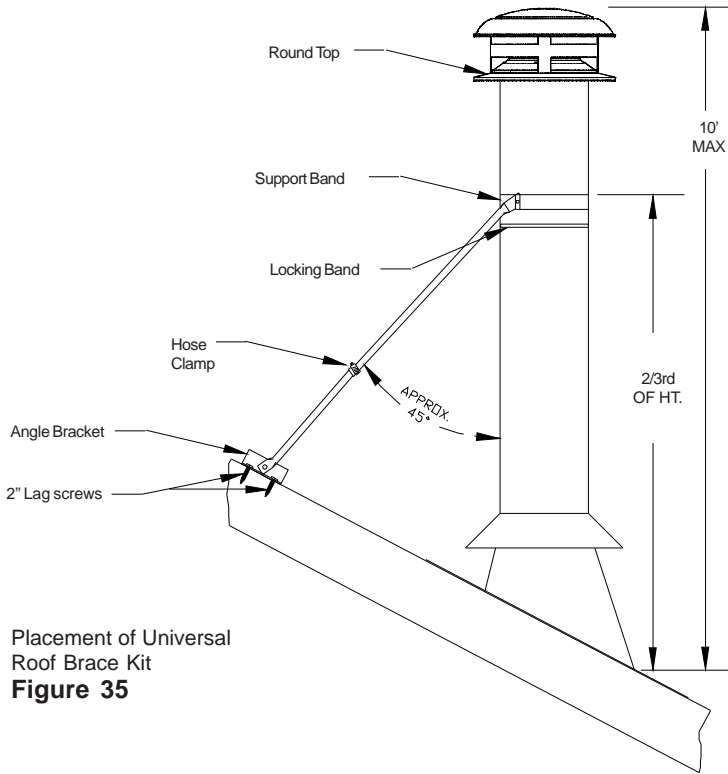


Figure 34

NOTE: Do periodic inspection of all fasteners including the hose clamps as high winds can cause the chimney system above the roof to vibrate and in time loosen some of the fasteners.



Placement of Universal Roof Brace Kit
Figure 35

ROUND TOP (RTS)

1. Place RTS Top over an installed chimney Length so that the three legs slide down over the outside of the chimney (see Figure 36).
2. Press down evenly on the lower skirt so that the skirt seats tightly on the upper edge of the chimney Length (see Figure 37).
3. Be sure the RTS Top is level. Place the Cinch Band over the Length and all legs so that the Cinch Band rests evenly on the turned-out flanges (see Figure 38).
4. Firmly tighten the Cinch Band with screw and nut provided (Figure 39). To remove the RTS Top, simply loosen the Cinch Band and slide RTS Top off the Length.



FIGURE 36



FIGURE 37



FIGURE 38

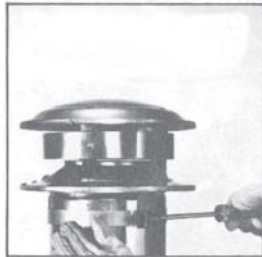


FIGURE 39

SPARK ARRESTER (SA)

Use a spark arrester if you have a shingle roof or live in a forested area. If the chimney is used for venting a gas appliance, use a spark arrester to keep birds out.

For 6" to 8" diameters a pre-formed spark Arrester is available.

1. Place the pre-formed Spark Arrester directly over the dome and skirt of the Round Top (Figure 40).
2. Ensure the flanged end of the Spark Arrester is on top of the dome and the bottom folded edge overlaps the skirt.

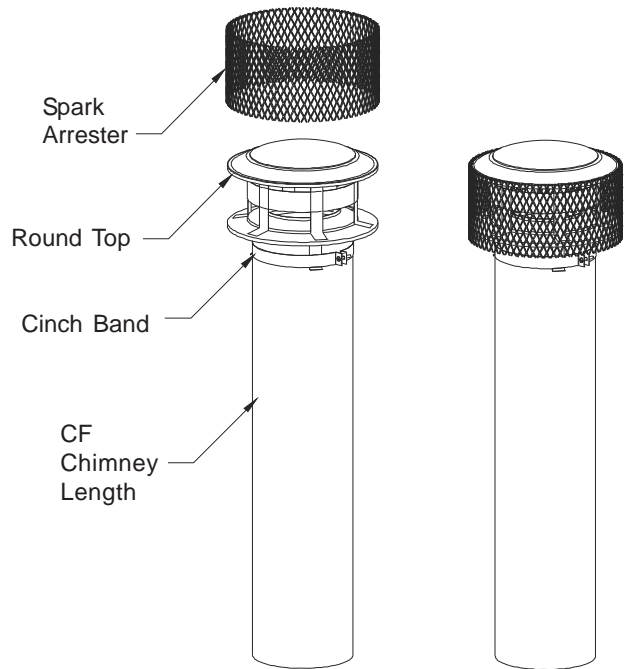


FIGURE 40

If clogged:

If the Spark Arrester becomes clogged with creosote, it should be cleaned or replaced. Remove Round Top by removing cinch band. Lightly tap away (from the outside of the Spark Arrester) any creosote residue. If necessary use a soft bristle brush for assistance. If Spark Arrester is to be removed from the Round Top, release the bottom edge of the Spark Arrester from the skirt edge and raise Spark Arrester from Round Top.

MAINTENANCE AND CLEANING OF THE CHIMNEY:

The need for chimney maintenance depends on the kind of appliance and how it is operated. Gas and oil-burning appliances need very little, but wood-burning appliances may need a great deal of chimney maintenance.

How you burn wood in your stove or fireplace directly affects the formation of creosote. Use more dry kindling and paper first to warm up the chimney system to a temperature between 350 to 500 F. Burn hot, bright fires and fire each load hot. It is important to load your appliance properly and to avoid smoldering fires. Fast, effective start-ups are important, as is the moisture content of the wood being burned. If your wood is not completely seasoned, split your wood in smaller pieces instead of larger ones. Ideally, the moisture content of your firewood should be between 18 to 22%. A good investment in assisting you in monitoring your system is a surface thermometer for single wall stove pipe or a probe thermometer for double wall stove pipe. Ensure only low sulphur content coal (1% or less) such as anthracite is burned.

“Creosote and Soot - Formation and Need for Removal”

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote creates a chimney fire with extremely high temperatures.

With a new installation, the chimney should be inspected frequently (every 2 wks) to determine the rate of creosote formation. When familiar with the appliance and chimney characteristics, the chimney should be inspected at least once every 2 months during the heating season to determine if a creosote or soot build-up has occurred. Check spark arrestor screens at least every 2 to 4 weeks. If the spark arrestor becomes clogged with creosote, it should be cleaned or replaced.

If creosote or soot has accumulated, it should be removed to reduce the risk of chimney fire. Depending on the rate of buildup (as little as 1/16") and as you learn what is going on in the chimney, you can adjust your cleaning schedule accordingly. Every chimney flue and flue pipe shall be inspected annually and cleaned as often as may be necessary to keep the chimney and flue pipe free from dangerous accumulation of combustibles.

Chimney and flue pipe are particularly susceptible to off-season condensation. The incomplete combustion of wood produces acids which, when combined with moisture, are corrosive. During the heating season, corrosion tends not to occur because the heat in the system evaporates the condensation of any water vapour that may be formed.

Warm, moist air during the summer months passes slowly through the heating system. It makes any remaining ash or creosote moist and soggy. Corrosion of steel occurs where these deposits remain.

Off-season corrosion can be reduced considerably if the system is thoroughly cleaned after the last fire of the heating season. Where coal is burned, the system must be thoroughly cleaned within 48 hours of shutting down the system for the season and all soot be removed from the chimney system. this should be the

most careful cleaning the system receives all year. Air inlets should be closed and sealed if necessary to prevent the constant flow of air through the system.

Contact a professional certified chimney sweep for chimney cleaning services and advice if you have any doubts about your ability to clean your chimney system or if the task is too large.

To visually inspect the chimney, remove the Round Top by loosening the the nut and bolt from the securing band. This will permit the insertion of a flashlight for inspection and a properly sized plastic chimney cleaning brush. A metal brush may scratch the liner and lead to premature corrosion.

The Tee Plug can be removed by turning the lugs to the side. Be sure to replace the Round Top and the Tee Plug when you are finished inspecting and cleaning the chimney.

If chemical cleaner is used to assist in cleaning your chimney, make sure it is a product which is non corrosive. Selkirk will assume no liability for damage resulting from the use of chemical cleaners. It does not replace the need for a mechanical cleaning. The optimal method for cleaning a chimney is by a mechanical brushing of the chimney in conjunction with a complete evaluation by a certified chimney sweep.

CHIMNEY FIRES AND WHAT TO DO ABOUT THEM

Your CF Sentinel chimney is not intended or designed for use as a combustion or fire chamber. It is very easy to over fire your woodburning appliance with kindling, scrap lumber, brush or any fast burning fuel. This can produce flames and high temperatures all the way up the chimney, and may cause chimney damage. If you see your appliance or the stove pipe glowing red, you are risking chimney damage, or a fire. The creosote may be burning inside the chimney.

If you see flames coming out the top, you are either overfiring or there is a chimney fire. The following materials should not be burned in your woodburning appliance: pressure treated lumber, rail road ties, salt water driftwood or plastic. Burning such materials may lead to severe corrosion of the appliance and the chimney system.

If the fire in your appliance has gotten out of control, or if you suspect a chimney fire for any reason, follow these steps:

1. Immediately close all dampers and/or air entrance openings to your appliance. This includes doors on Franklin type stoves. Block off fireplace openings.
2. Alert your family to the possible danger.
3. Inspect your appliance and chimney surroundings for possible fire. If in doubt, alert your Fire Department.
4. Do not continue to use your appliance until it and your chimney have been thoroughly inspected. Overheating can cause metal parts to expand, buckle and crack. If you are not certain, have a certified wood technician or certified chimney sweep disassemble all parts so they can be inspected and replaced.
5. Do not use salt or water on the fire in your appliance. Salt is corrosive and water will cause a dangerous steam explosion. You might be able to control the fire by using ashes, sand or baking soda, since baking soda is an ingredient used for dry chemical fire extinguishers.
6. After a chimney fire, when it is safe to do so, check internal locations such as the attic and under the roof and keep watching for two or three hours. There may be delayed smoldering and subsequent ignition, even if the fire inside the chimney has been controlled.

WARNING:

DO NOT USE FUEL MATERIALS CORROSIVE TO THE CHIMNEY LINER SUCH AS DRIFTWOOD, PLASTICS, CHEMICALLY TREATED WOOD, ETC.

BURN ONLY SEASONED FIREWOOD!

Wood burns completely only at very high temperatures with enough oxygen present. The fuel, heat, and oxygen have to mix together in the same place at the same time. Although all stages of burning wood actually occur at the same time, it will burn in 3 stages: boiling off the water, vaporizing wood gases and burning the charcoal.

Wood burning appliances will burn best with clean, well seasoned dry firewood with an ideal moisture content of 18% to 22%. The denser or heavier the wood when dry, the greater its heat value. Seasoned firewood is essential for an optimum performance. Seasoned wood will burn hot, emit less smoke and create less creosote.

Un-seasoned wood when burned, must release water stored within the wood. This cools the fire, creates creosote and hampers a complete burn. Be careful of wood advertised as seasoned. You may want to invest in a moisture meter.

Signs of seasoned firewood are:

- Dark colored; wood darkens with age;
- Cracks in the end grain; radiating from the center of the log like bicycle spokes;
- Light in weight; which indicates low moisture content - but hardwood will weigh more than softwood;
- Sound; hit 2 pieces together, wet will have a dull "thud" sound where as dry will ring like a bat hitting a baseball;
- Easily peeled or broken bark; no green should show under the bark;
- Burn some; if it hisses, then it is to wet.

The time it takes to season wood varies from 6 to 18 months. Hardwood dries slower than softwood and some may take well over a year to dry. To speed-up drying:

- Cut to length;
- Split in a variety of sizes no larger than 6" exposing the wet interior and increasing the surface area of each piece;
- Stack loosely in a criss cross pattern to get good air circulation;
- Store above ground at least a foot and away from buildings in a sunny, well ventilated area;
- Cover the top to keep rain and dew off the wood;
- Leave sides open to breezes; for air circulation.

AVOID BURNING "green", "unseasoned" "wet" wood. Heat is wasted as it must first dry and evaporate the moisture content in the firewood. As the water evaporates it will form into creosote which will then condense in the relatively cool firebox and chimney and will not permit a clean hotburn.

REPLACEMENT PARTS LIST

DESCRIPTION	PART N°.
	SENTINEL CF
36" Chimney Length	*CF-36
24" Chimney Length	*CF-24
18" Chimney Length	*CF-18
12" Chimney Length	*CF-12
9" Chimney Length	*CF-9
Insulated Tee/Tee Plug	*CR-IT
15 ⁰ Insulated Elbow Kit	*CF-EL15K
30 ⁰ Insulated Elbow Kit	*CF-EL30K
Ceiling Support Package	*CF-CBSP
Wall Support Package	*CF-WSP
Wall Band	*CF-WB
Cathedral Ceiling Support	*CF-CCB
Roof Support Package	URSP
Flashing Assembly 0/12-6/12	*CF-FRA-A
Flashing Assembly 7/12-12/12	*CF-FRA-P
Universal Roof Brace	URBK
Attic Insulation Shield	*CF-AIS
Joist Shield	*CF-JS
Insulated Wall Thimble	*CF-IWT
Round Top	*CF-RTS
Smoke Pipe Adapter	*CF-SPA
Anchor Plate	*CF-AP
Universal Shielding Insulation	SUSI

An * asterisk denotes the diameter of chimney (6", 7" or 8").

ANCHOR PLATE - MASONRY FIREPLACE

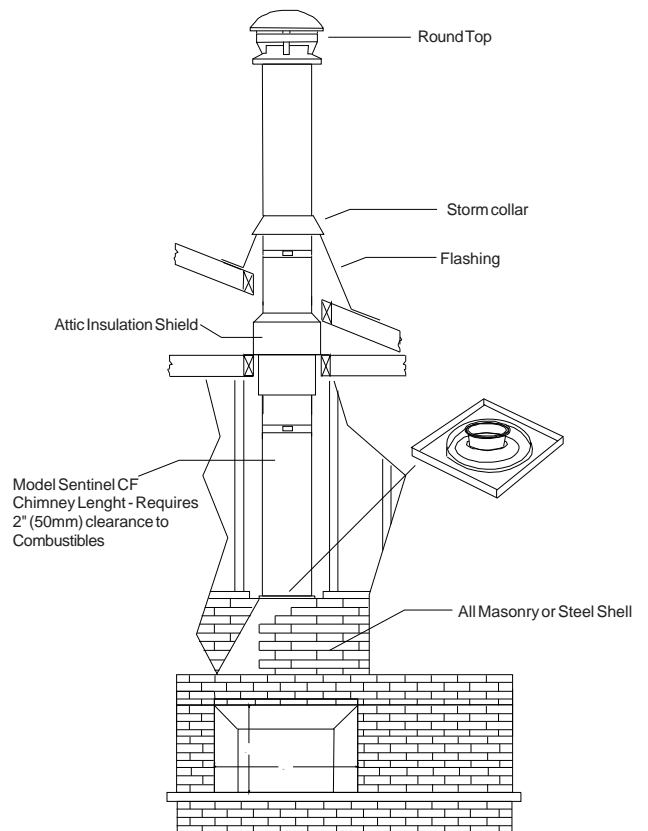
NOTE: It is of utmost importance that this chimney be installed in accordance with these instructions. Certification of the chimney is void if the installation instructions are not followed. The CF Sentinel chimney requires 2" (50mm) clearance (air space) to combustible material.

Refer to the following sections in these instructions to complete your installation to a masonry fireplace:

- Pre-Installation Guidelines
- CF Sentinel Joint Security
- Framing Details
- Attic Insulation Shield
- Firestop Joist Shield
- Elbow Installation
- Roof Support
- Roof Flashing
- Roof Brace Kit
- Round Top
- Smoke Pipe Adaptor

Model CF Sentinel Anchor Plate provides a connection from a masonry fireplace to a Selkirk Model CF Sentinel chimney. The following steps describe the installation of this part (component) and the above mentioned sections of these instructions are to be followed.

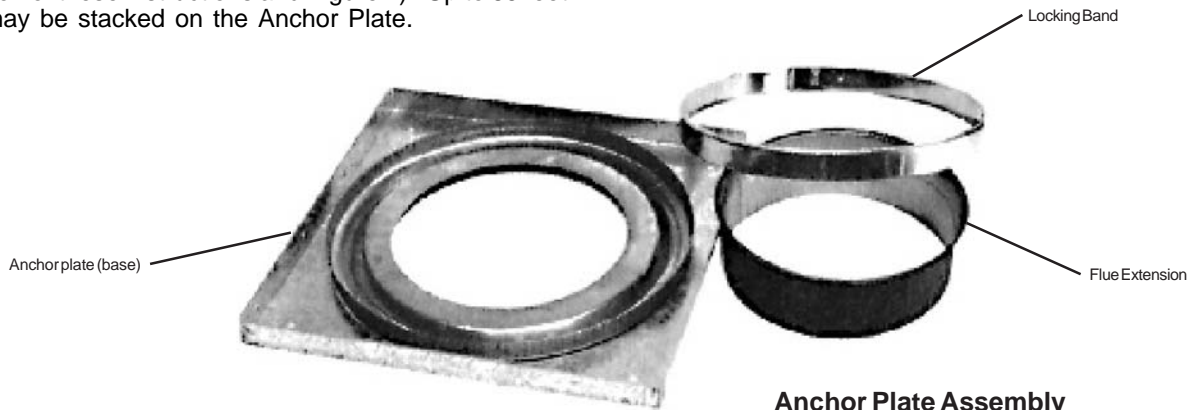
1. Mount four (4) 1/4" diameter bolts, 3" long securely into the top of the masonry fireplace around the outlet opening. Use the 4 holes on the anchor plate as a template to locate the placement of these bolts.
2. Apply a bed of mortar approximately 3/4" in depth and 3" in width completely around the fireplace opening. Make sure the threaded ends of the bolts protrude a minimum of 1" above the bed of mortar.
3. While the mortar is still damp, place and level the Anchor Plate over the extended studs. Secure using a washer and nut for each bolt.
4. Check the Anchor Plate for level and allow mortar to set.
5. Place the flue extension (crimped end down) into the opening of the Anchor Plate. Place a section of chimney onto the Anchor Plate and secure to the Anchor Plate with a Locking Band and stainless steel sheet metal screws (see CF Sentinel Joint Security section of these instructions and Figure 4). Up to 85 feet of chimney may be stacked on the Anchor Plate.



"LISTED" FACTORY-BUILT FIREPLACES

When Selkirk chimney Model CF Sentinel is approved with a "Listed" factory-built fireplace, the chimney and fireplace are tested in combination as a complete system and the fireplace instructions must be followed.

Where required in the "Listed" factory-built fireplace installation instructions, an Anchor Plate can be used to provide a connection from a "Listed" factory-built fireplace to the insulated chimney Model CF Sentinel.



Ensure that you obtain any necessary building permits and that your installation will conform with all federal, provincial, municipal installations and fire codes for all requirements affecting your installation. Check with your local Building Code for masonry fireplace requirements.

CHART 1 - OFFSET CHIMNEY INSTALLATION

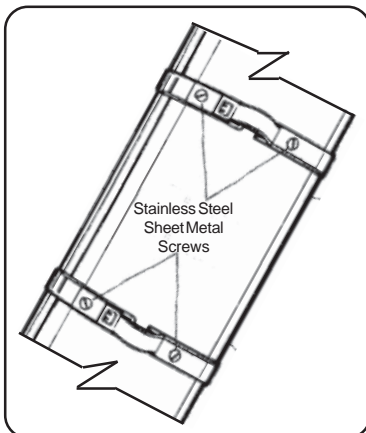
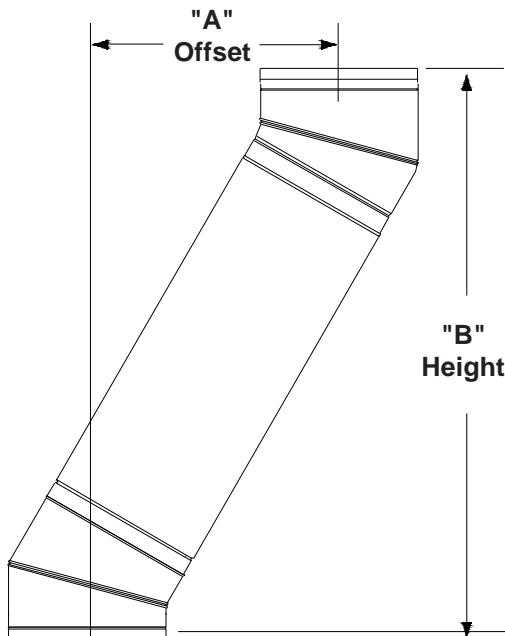
When the chimney path cannot be perfectly straight, the need to install a chimney offset must be used when it becomes necessary to offset the chimney in order to clear a joist or an obstacle. The two (2) charts below will assist you in selecting the proper combination of elbow angle and chimney length(s) that will provide the necessary degree of offset within an available height.

1. Select the column with the proper chimney diameter of your system.

2. Determine the distance of the offset required by dropping a plumb bob for an accurate measurement. The offset is measured at the chimney centre line as per the "A" measurement in the diagram.

3. On the chart, find the predetermined distance (under the "A" column) required for the 15° elbow. For greater offset, use the 30° offset chart.

4. After finding the offset, look under column "B" to find the specified height and appropriate "chimney lengths" required in the left column.



Chimney Lengths	6" Diameter		7" Diameter		8" Diameter	
	A	B	A	B	A	B
none	1"	11"	1-1/4"	11"	1-3/4"	10-3/4"
9"	3-1/4"	19-1/2"	4"	19-1/2"	4-1/8"	19-1/4"
12"	4"	20-7/8"	4-1/4"	21-1/8"	4-3/8"	20-7/8"
18"	5-1/2"	26-1/2"	5-5/8"	26-3/4"	6"	26-3/4"
24"	7-1/8"	32"	7-1/8"	32-5/8"	8"	32-3/4"
9" + 24"	9-5/8"	40-5/8"	10-1/4"	40-7/8"	10"	41-1/8"
36"	10-3/8"	43-7/8"	10-3/4"	43-7/8"	11-1/8"	44"
9" + 36"	12-1/2"	52-1/4"	13"	52-1/8"	13-1/8"	52-1/8"
12" + 36"	13-1/4"	54"	13-1/2"	53-5/8"	14-1/2"	53-3/4"
18" + 36"	15-7/8"	59"	15-5/8"	59"	15-1/8"	59-3/4"
24" + 36"	22-1/4"	64-7/8"	17-7/8"	65-1/8"	17-3/8"	65-5/8"
12"+24"+36"	23-1/2"	75-1/8"	20-1/2"	75-3/8"	21-1/4"	75-1/2"

All measurements in these charts are in inches. Construction tolerances ± one inch.

Chimney Lengths	6" Diameter		7" Diameter		8" Diameter	
	A	B	A	B	A	B
none	2-7/8"	13"	3-3/4"	14"	3-3/4"	14-1/4"
9"	7-3/4"	20-1/4"	8-3/8"	21-1/4"	7-3/4"	22-1/8"
12"	8-1/4"	21-1/2"	9-3/8"	22-3/4"	7-5/8"	23-1/2"
18"	11-1/2"	27"	11-5/8"	27-1/2"	11-3/8"	28-3/4"
24"	14-3/8"	31-7/8"	15-1/4"	33"	14-1/2"	34-1/4"
9" + 24"	18-5/8"	39-3/4"	20-1/4"	40-3/8"	18"	42-1/4"
36"	20-1/4"	42-1/2"	22"	42-1/2"	21"	44-1/4"
9" + 36"	25-1/8"	49-7/8"	26"	50-3/8"	24-1/4"	52-3/8"
12" + 36"	26-1/8"	50-3/4"	26-3/4"	52"	24-3/4"	53-7/8"
18" + 36"	28-5/8"	56-1/4"	29-3/4"	56-1/2"	28-3/8"	58-7/8"
24" + 36"	32-3/8"	61"	34-3/8"	61-5/8"	32-1/4"	64"
12"+24"+36"	38-7/8"	69-1/4"	39-1/4"	70-7/8"	37-1/4"	72-1/2"

NOTE:

- Sentinel CF chimney is limited to offsets not exceeding 30 degrees. Combining offsets for greater angle is not permitted.
- Two pairs of (four) 15° or 30° elbows may be used per interior installation.
- Locking bands must be used at each joints. For added security on multiples lengths forming an offset, fasten the joints using two (2) #6 x 1/2" stainless steel sheet metal screws through the pre-punched holes in the locking bands (see diagram on the left).
- Never install an elbow in a joist area. Chimney sections must pass vertically through framed joist areas.
- Elbow support will support 30 feet of chimney and the maximum length of chimney allowed between elbows is 6 feet.

CHART 2 - CHIMNEY HEIGHT ABOVE THE ROOF

- Requirement # 1 :** The code requires that the chimney must extend at least 3 feet (900mm) above the highest point of the roof that it penetrates.
- Requirement # 2 :** The chimney must also be 2 feet (609mm) above any roof, wall or other obstruction within a horizontal distance of 10 feet (3m).

The following Chart is to assist you in determining the minimum chimney height you will require above the roof. You may need to add to this height as nearby buildings, trees and other parts of the house roof could interfere with airflow over and around the top of the chimney and affect its performance. If you think a nearby obstacle could affect draft, you might want to install one or more additional lengths.

DISTANCE FROM PEAK	PITCH OF ROOF											
	1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	
	CHIMNEY HEIGHT ABOVE ROOF (INCHES)											
10 Ft	*36	44	54	64	74	84	94	104	114	124	134	144
9 Ft	*36	42	51	60	69	78	87	96	105	114	123	132
8 Ft	*36	40	48	56	64	72	80	88	96	104	112	120
7 Ft	*36	38	45	52	59	66	73	80	87	94	101	108
6 Ft	*36	36	42	48	54	60	66	72	78	84	90	96
5 Ft	*36	*36	39	44	49	54	59	64	69	74	79	84
4 Ft	*36	*36	36	40	44	48	52	56	60	64	68	72
3 Ft	*36	*36	*36	36	39	42	45	48	51	54	57	60
2 Ft	*36	*36	*36	*36	*36	36	38	40	42	44	46	48
1 Ft	*36	*36	*36	*36	*36	*36	*36	*36	*36	*36	*36	36

All measurements are in inches.

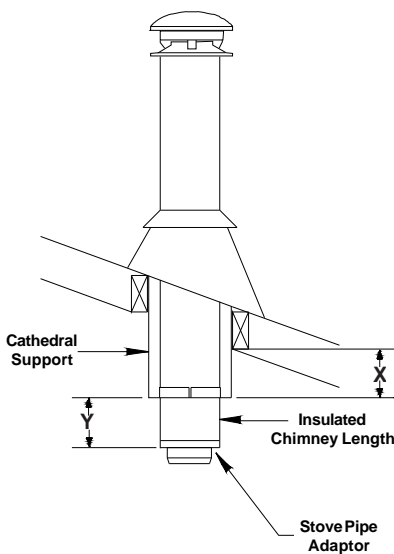
* Defaulted to 36" to meet requirement #1. Both requirements (#1 and #2) must be met.

- If the chimney extends 5 feet or more above the roof, a Roof Brace Kit is required.

CHART 3 - Connector Pipe Clearance below Cathedral Support

1. Identify the type of connector pipe you will be installing, single wall (requires 18" clearance to combustibles) or Selkirk's Double Wall Stove Pipe (model DSP) which requires 6" clearance to combustibles.
2. Determine the amount of the exposed Cathedral Support that will be projecting into the room as per the "X" in the diagram on the bottom left.
3. Select the pitch of your sloped ceiling from the chart below.
4. Select the measurement from the chart below where the pitch of the sloped ceiling column intersects with the exposed Cathedral Support row selection. This will determine the measurement of insulated chimney required below the Cathedral Support as per the "Y" in the diagram on the left.

NOTE: The minimum of insulated chimney below the Cathedral Support is 4 inches. This minimum is required for stability of the system.



CONNECTOR PIPE CLEARANCE REQUIREMENTS FROM SLOPED CEILING													
EXPOSED CATHEDRAL SUPPORT INTO ROOM		PITCH OF SLOPED CEILING											
		1/12	2/12	3/12	4/12	5/12	6/12	7/12	8/12	9/12	10/12	11/12	12/12
1 Single Wall Flue Pipe	"X" measurement	"Y" MEASUREMENT - INSULATED CHIMNEY LENGTH INTO ROOM											
	Box flush to ceiling on lower end	4	4	4.5	6	8	9	10.5	12	13.5	15	16.5	18
	Box 1" into the room	4	4	4	5	7	8	9.5	11	12.5	14	15.5	17
	Box 2" into the room	4	4	4	4	6	7	8.5	10	11.5	13	14.5	16
	Box 3" into the room	4	4	4	4	5	6	7.5	9	10.5	12	13.5	15
2 DSP - Double Wall Stove Pipe	"X" measurement	"Y" MEASUREMENT - INSULATED CHIMNEY LENGTH INTO ROOM											
	Box flush to ceiling on lower end	4	4	4	4	4	4	4	4	4.5	5	5.5	6
	Box 1" into the room	4	4	4	4	4	4	4	4	4	4	4.5	5
	Box 2" into the room	4	4	4	4	4	4	4	4	4	4	4	4
	Box 3" into the room	4	4	4	4	4	4	4	4	4	4	4	4

¹ Single Wall Flue Pipe requires 18" clearance from any combustible materials.

² DSP Double Wall Stove Pipe requires 6" clearance from any combustible materials.

All measurements are in inches.

INSTALLATION INFORMATION

Leave with homeowner. Homeowner: Keep in a safe place for future reference.

PRODUCT INFO

CHIMNEY MODEL : **CF Sentinel**

FLUE SIZE _____

TOTAL HEIGHT _____

INSIDE INSTALLATION OUTSIDE INSTALLATION

CONNECTED TO (type of appliance):

- WOOD STOVE
- BOILER
- FURNACE
- LISTED FACTORY-BUILT FIREPLACE
- OTHER (specify) _____

LOCATION OF APPLIANCE:

- BASEMENT
- MAIN FLOOR
- OTHER (specify) _____

INSTALLATION DATE: _____

DEALER INFO

DEALER NAME: _____

Address: _____

City: _____

Province: _____

TECHNICIAN INFO

TECHNICIAN NAME: _____

Address: _____

City: _____

Province: _____